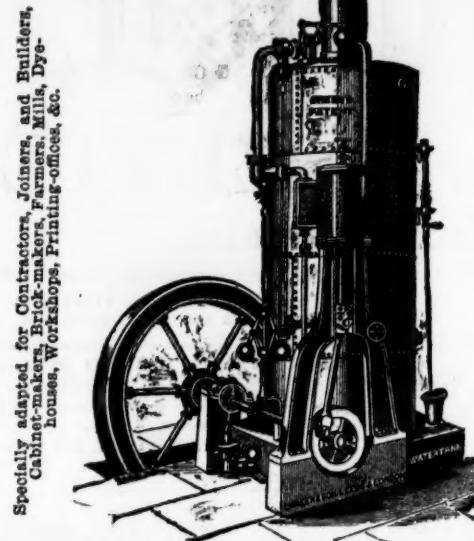




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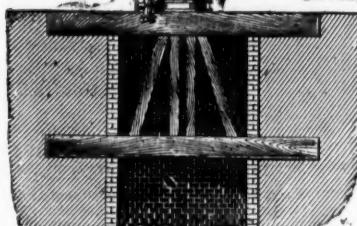
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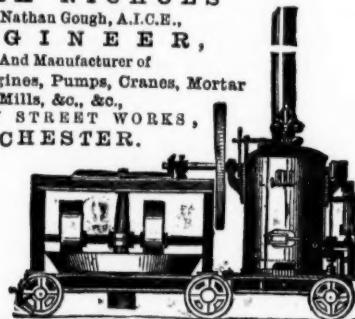
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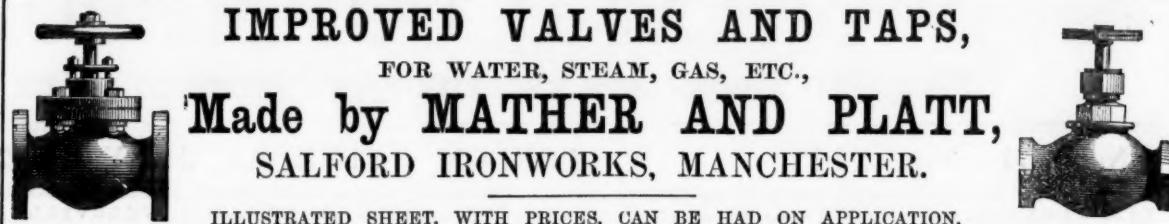
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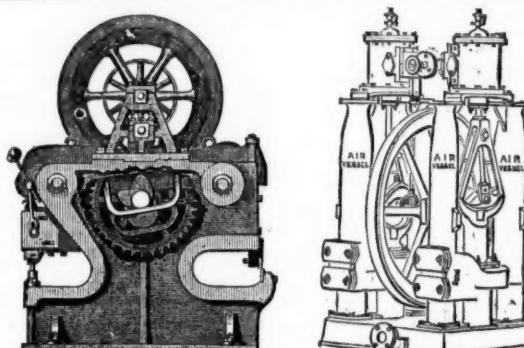
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## Meetings of Mining Companies.

## ST. JOHN DEL REY MINING COMPANY.

The annual ordinary general meeting of shareholders was held at the London Tavern, Bishopsgate, on Wednesday, Mr. JOHN HOCKIN in the chair.

The MANAGING DIRECTOR having read the notice convening the meeting and the minutes of the previous one, the directors' report, a full abstract of which was published in last week's *Mining Journal*, was submitted.

The CHAIRMAN, in moving the reception and adoption of the report, said:—The report which we now present to you enters very fully, as usual, into the details of the company's operations. It contains reports, very carefully drawn up, by each of your principal officers at the mines, and concludes with a very able and exhaustive summary by your superintendent of the several works executed during 1870. I will begin the few remarks I have to make with the subject that stands in its first pages, and which is the most important as regards the future of your undertaking—i.e., the progress made in the works for re-opening and future working the mines in depth. The sinking has gone on steadily and successfully during the year, and you will, no doubt, have observed with satisfaction that we have accomplished in A shaft just 1 fm. a month more sinking than was sunk in the preceding year, though the rock has been harder, and, from the depth being greater, the raising the water and debris has been more laborious. In B shaft an increase of water has impeded us, but now the pumps are at work, as we hope they would be in May, this is not likely to cause further delay. For this increased progress we are much indebted to dynamite, for by its agency we have accomplished during the early months of this year, when it was almost exclusively used, quite double the work we could have hoped to have done with gunpowder. There is still great difficulty, delay, and expense attending the shipping it, owing to the wholly unnecessary restrictions placed upon its transport and storage by the Nitro-Glycerine Act, but we succeeded in getting one shipment made last month, and a further shipment is being made this day at Liverpool, so that I hope we may not be without it for any lengthened period. In Brazil, I am glad to take the opportunity to say that the authorities, fostering as they always do the mining interests, afford us every facility for its transport. Equally good and satisfactory progress has been made in the surface and other works necessary for opening the mines by means of the new shafts. The successful inauguration of the extensive water-courses by which the motive power is conveyed to the new wheels and returned to the old works, and the fixing and setting in motion the permanent pumps in the shafts, are most important results achieved during the year, calculated to give relief from that anxiety which is naturally felt whilst newly-projected works are incomplete. The total expenditure on account of these works has been 16,209L for surface works, and 19,316L for shaft work proper—i.e., sinking, hauling the debris and water, timbering, providing and fixing the pump—making the whole 35,526L. The sinking has thus far been accomplished for less than the estimated price, and it is not believed, unless some unforeseen difficulty arises, that it will exceed the estimates. The surface works have, however, thus far, and will ultimately it is believed, exceed the estimates. This arises from its having been deemed wise and prudent to extend the original plan, so as to ensure an amount of power and efficiency for future working under the new system on which full reliance can be placed. An additional outlay, under this head, of about the sum of 3000L will also be occasioned by the unforeseen destruction and the necessary reconstruction of the Bahu pumps. In regard to the general operations at the mines, you will have observed that though we had not been able to obtain as much mineral for treatment as was obtained during the previous year, yet the yield has been better, and consequently the falling off in the gold produce has not been in the same ratio as the falling off in the mineral. We have every reason to hope that we may be able to keep up the supply of mineral during the current year to at least the quantity obtained during 1870, for though we do not anticipate being able to obtain any mineral from the upper sections of the Bahu Mine, the only mineral available there being under water, the last two months' working induces us to believe with some confidence that the Gamba and Cachoeira Mines will supply monthly as much, if not more, mineral than was obtained from all sources during 1870. If this can be done the change from the Bahu to the Gamba as the source from whence the chief supply is to be obtained until the Bahu lode is reached in depth will be satisfactory and important one, as in the Gamba we are working on a strong main lode, similar in many respects to the great lode of Morro Velho, though not so large nor so rich, but which is not likely to be exhausted, whereas the mineral I have referred to as having been accessible in the Bahu before the water rose and covered it is mineral left standing here and there, when the main body of the lode was excavated. We have, therefore, mineral both in the Gamba and East Cachoeira that can be relied on for any length of time in the former, and for at least two years in the latter. It is hoped, too, that during the current year some help may be obtained in the way of mineral from the Gaia Mine. A very important question under existing circumstances, as I said last year, is the loss of gold in treatment. The average loss of the last three years may be taken at a little over 1 oitava, or 2½ dwts., value about 8s. 6d. per ton of mineral treated. This on the tonnage of the three years amounts to the large sum of 69,000L. This gold is exceedingly fine, almost imperceptible, and is, therefore, very difficult to deal with. We must acknowledge to some little disappointment at no real improvement having taken place in this respect during 1870, but from the strenuous exertions now being made at the mines to recover a further portion of this loss we do not despair of seeing the loss still further reduced. In regard to the cost, it will be seen by the comparative statement account, No. 7, that the increase in last year's cost has been 7600L. The increase in the rate of exchange, over which your officers have no control, accounts for 7100L; and you will see that there is an increase of 3000L for stores shipped, and duties and carriage of the same, so that this year's work has been conducted at still less outlay for labour than the work was for the year 1869, which is highly creditable to your superintendent and other officers. As to the loss of the year, if satisfaction can be felt on such a subject, it is satisfactory to know that it was all incurred in the first half of the year. I reported a loss to you at Christmas, you may remember, of 5977L, whereas the total loss of the year is only 5024L, so that we have recovered during the second half of the year 950L of the loss incurred in the first half. On the Fernam Paes Estate the Gaia level has been driven the distance calculated for reaching the lode, so that it is probable that the advices to be received to-morrow may inform us that the lode has been reached. I now come to finance. The cash in England and Brazil is 20,000L, whereas the liabilities to Aug. 13 are 25,000L. The reserved fund securities amount to 21,405L, out of which 3889L is due to the new shaft account, which we have not transferred, because we expect to receive almost daily further sums on account of the Newcastle property. This leaves 17,515L as the amount of the reserve fund, after paying new shaft expenses up to March 31. At the rate of expenditure of the last twelve months this may be considered equal to the cost for this account up to the end of March, 1872; but as temporary advances have to be obtained to meet the drafts against gold shipped until it comes to market, we, as a matter of precaution, ask you to authorise us to borrow to the extent of 5000L beyond the reserve fund, for which purpose I shall have to propose a resolution. This is only a temporary measure, which we may or may not have recourse to. At the next meeting, at Christmas, we shall be in a position to judge better what our requirements are likely to be, and we then propose to lay before you our financial scheme; but we desire now to make it known that we shall take no step without taking you into our council. Our desire is to avoid, if possible, making calls, and with your help we trust there will be no difficulty in carrying out an arrangement which will make such a step unnecessary. I have now given all the explanation which it occurs to me you may desire regarding the operations of the year and the position of the company; but I trust if any shareholder present desires further information he will not hesitate to seek it, for our desire is to impart to the proprietors all the information we ourselves possess.

Mr. TENDROS did not hear which mine the Chairman had stated would

be permanent, and which would only last two years; he also understood that the estimate for surface works would be exceeded, and would be glad to hear the reason of the 3000L difference.

The CHAIRMAN explained that in Gamba they had a lode that would last for very many years, in fact longer than any of them would live to see it; and in the East Cachoeira they had as much as would take them fully two years to remove. As to the difference of 3000L, there had about six months ago been a fall of ground at Bahu, which had broken their pumps, and this of course they had to make good.

SIR JOHN SWINBURNE enquired what progress was being made with the introduction of dynamite, and whether there was still the same difficulty in shipping it?—The CHAIRMAN said he had recently been able to make two shipments to Rio. He had purchased of Mr. Webb, of Carnarvon, but his stock was now exhausted, so he had sent an order for 4½ tons to Hamburg, where it was manufactured, but owing to an accident at the works he could only obtain a few hundredweights. The order would be completed as soon as the quantity could be manufactured, and if they could ship direct from Hamburg to Rio the whole difficulty would be overcome, for in Brazil they encouraged everything that could tend to the advancement of mining, and, therefore, placed no restriction upon the transport and use of dynamite, being in that respect in advance of Europeans. As to the cost of freight, it was, owing to the restrictions, at present 20 times that charged for other materials, and it was seldom possible to ship it except where the broker took the ship, and was, therefore, interested in making as much out of the freight as possible.

A SHAREHOLDER observed there was now a new invention for using wire-rope as a substitute for rails laid on the ground, and he would think such an invention might be useful to them in certain cases.

The CHAIRMAN said that the wire tramway had not escaped their attention. He went to Brighton when the line was exhibited there, and was quite satisfied with it. As soon as they got a little more in funds they would be quite ready to use it to their Gabiroba Mine, from whence they had a distance of about 2½ miles to carry the ore, which did not pay to bring it down on mule-back.

A SHAREHOLDER enquired what was the present depth of their shaft, and to what depth they had to sink, also how long it would take to complete.

The CHAIRMAN said that the depth to which they had to sink was 178 fm.

and their A shaft was now down 112 fathoms. As to the time they hoped it would not be so long as two years. They anticipated getting down by the end of 1872, and if they progressed at the rate of 5 fm. per month they would be enabled to accomplish it even before that date.

A SHAREHOLDER would like to know the difference in cost per pound of dynamite and gunpowder?

The CHAIRMAN said that dynamite was about three times the price per pound of gunpowder, but owing to the larger amount of work they could do in a given time he considered it more economical in use.

SIR J. SWINBURNE remarked that it had been proved that dynamite was perfectly safe, yet, in consequence of unnecessary restrictions placed upon its transport and storage, it could not be employed. Powder mills, as a rule, blew up once in seven years, yet those explosions were regarded as accidents that were not preventable, and little was thought of them. He would, therefore, suggest that considerable pressure should be put upon the Government, and quite believed that if pressure were so put the restrictions could be removed. He had not put his resolution in writing, but would propose "That the Chairman and Board of Directors be requested to take immediate steps with a view to cause the restrictions on the transmission of dynamite to be removed."

The CHAIRMAN explained, after the resolution had been seconded, that he had only a few weeks since formed one of a deputation to the Home Secretary, which was attended by about twenty M.P.'s, and he believed a very large proportion of the mining interest was represented; but Mr. Bruce very politely disposed of them by remarking that, as he was not practically acquainted with the subject himself, he could only say that he would take the opinion of scientific men, and see that the matter received attention.

A SHAREHOLDER suggested that the Board of Trade would be the proper authority to apply to.

The CHAIRMAN said that, unfortunately, that would be useless, as the Nitro-glycerine Act placed all the power in the hands of the Home Secretary, and it was his license that was required to authorise the storage or removal. If they could ship from Hamburg to Rio, however, as he hoped they would be enabled to do, they need not trouble themselves in the matter. He presumed, after that explanation, that it would be unnecessary to put the resolution which had been proposed.

The motion was then withdrawn, and the reception and adoption of the report was unanimously carried.

The CHAIRMAN said that their next resolution was that the directors be authorised to borrow temporarily, and in case it should be required, not more than 5000L in excess of the amount authorised to be borrowed by the fifty-fourth article of their regulations.

A SHAREHOLDER enquired whether they would borrow from their bankers or upon debenture?

The CHAIRMAN explained that at a subsequent meeting they would be prepared to submit a financial scheme to the shareholders, which would probably involve the issue of debentures, but for the present they intended to borrow of their bankers.

Mr. Freeman was then re-elected a director, and Messrs. Jago and Herapath auditors, and the usual complimentary votes to the Chairman, and to the officers of the company here and in Brazil were passed.

The CHAIRMAN, in acknowledging the vote, said that they had gone through several very anxious years, but he hoped they could now see the end of their difficulties approaching.—The meeting then separated.

## GENERAL MINING ASSOCIATION.

The adjourned general meeting of shareholders was held at the offices, Old Broad-street, on Tuesday,

Colonel E. W. SCOVELL in the chair.

Mr. J. B. FOORD (the secretary) read the notice convening the meeting.

The report of the directors stated that the proprietors were informed by circular, addressed to them on April 10, that in consequence of the delay in the receipt of the re-valuations of the property in Nova Scotia the directors would be unable to present the accounts for the past year, in the complete form they desired, in time for the ordinary general meeting, convened for April 26. That meeting was, therefore, adjourned until June 27, 1871. The re-valuations have since been received, but as they are not found to contain all the information which, in the directors' judgment, is essential to enable the proprietors to form an accurate estimate of the real value of the property of the association, it has been found necessary to refer them back to Nova Scotia in order to obtain the information required. The accounts for the year ending Dec. 31, 1870, have, therefore, been made up on the basis of the old valuation, have been duly audited, and are appended to this report. The following is a comparative statement of the sales of coal at the three collieries of the association during the two last years:—

	1870.	1869.	Increase.	Decrease.
Albion .....	Tons 83,229 .....	90,532 .....	— .....	7,303
Sydney .....	109,832 .....	96,898 .....	12,934 .....	—
Lingan .....	28,085 .....	30,675 .....	— .....	2,590
Total ....	Tons 221,146 .....	218,105 .....	12,934 .....	9,893
	Total increase .....	Tons 3041		

The directors regret that the accounts do not show more satisfactory results. They will, however, be found to contain a correct record of the working of the past year, after every item which properly attaches to it has been charged, and every bad and doubtful debt standing over from former years written off; and although the Sydney Mine is the only establishment which has produced a profit, the current expenditure at the other two establishments has been so reduced, and the outlay for new works brought so nearly to an end, that the directors believe that the ordinary outgoings of the Albion and Lingan Mines will in future be fully covered by the sales of the coal. Many of the reductions made by the directors in the general expenditure of the company could not be brought into operation sufficiently early to affect in any material degree the results of the past year, but they believe that the retrenchments already carried out will have a perceptible effect upon the returns of the current year. The duty on the Nova Scotia coal in the United States remains without alteration. A resolution for abolishing the duty passed the House of Representatives, but the session terminated before the Senate took any action in the matter. The belief is, however, very general that the duty will ultimately be taken off, being a measure of vast importance to many interests in the States, as well as in the British provinces. The proprietors have already been informed of the sale which has been effected of the Joggins Mines. Some unavoidable delay arose in the final completion of this transaction at the time appointed, but the purchase-money has since been received, and will appear in the accounts for the current year. The property and establishments of the association are in full sound working order, and equal to the production of an almost unlimited quantity of coal, which every means will be earnestly sought to dispose of for the benefit of proprietors.

The CHAIRMAN said that this was the adjournment of the meeting, at which it was agreed to make a re-valuation of the company's property. That re-valuation had been received, but it had not been conducted on the basis which the directors thought it desirable it should have been—the re-valuation, therefore, had not been submitted to the meeting. He then entered at some length into various details in connection with the three collieries—the Sydney, the Albion, and the Lingan. He stated that the first had shown a profitable result, but that the other two had been unprofitable, arising principally from the great competition among other collieries in the district. Every effort was being made to reduce the expenses, and the employees at the mines had been subjected to a reduction of about 10 per cent. in their wages. During the winter season, when work was slack, the number of hands had been reduced. At present the rent of their London offices was 300L per annum, but in two years the lease would expire, when less expensive offices would be obtained. At the last meeting it was announced that the sale of the Joggins Mine had been concluded; some delay, however, had arisen with the final settlement, owing to the necessity of obtaining a Deed of Incorporation; but the necessary conditions had been complied with, and the consent of the Colonial Government obtained, the purchase had been concluded, and the money paid. He expressed a hope that the duty on coal that at present existed in the United States would at no distant date be removed, in which case there would be a much larger and fairer field for the produce of this company. That duty, there was no doubt, had acted very prejudicially to the interests of this company; the competition had been so great with other collieries that one had delivered coal in New York at an average price of 2s per ton. Although that particular colliery had certainly succeeded in selling its coal, it also succeeded in selling its plant, which was disposed of under the power of a sheriff's officer. Reverting to the re-valuations, he stated that as it did not contain all the information which, in the judgment of the directors, was essential to enable the proprietors to form an accurate estimate of the real value of the property, it had been referred back to Nova Scotia, so as to obtain the information required. He added that every bad and doubtful debt standing over from the previous year had been written off; although, as he had already stated, the Sydney was the only property that had yielded a profit, yet the current expenditure at the other

two establishments had been so reduced, and the outlay for new works brought so nearly to an end, that there was reason to believe the ordinary outgoings of those two properties would henceforth be fully covered by the sale of their produce. Having assured the shareholders that the property and establishments were in full and sound working order, and equal to the production of an almost unlimited supply of coal, he moved that the report be received and adopted.

The motion being duly seconded was, after some discussion, put and carried.

A vote of thanks to the Chairman terminated the proceedings.

## THE UTAH SILVER MINING COMPANY.

A meeting of the shareholders was held at the offices, Austinfriars, on Monday, to take into consideration the purchase of the property.

Mr. A. G. KITCHING in the chair.

Mr. W. J. LAVINGTON (the secretary) read the notice convening the meeting.

The CHAIRMAN said that, being unexpectedly called upon to occupy the chair, owing to the unavoidable absence of Mr. G. Batters, who was before a committee of the House of Lords, he (the Chairman) must ask the kind consideration of those present while he endeavoured to submit the information that had been received with regard to the property proposed to be purchased by the Utah Silver Mining Company. He would in the first place submit the statement of the vendor, Mr. I. C. Bateman, in which he fully explains the property offered to the company, which was as follows:—

The Bingham Canon mining property is situated about 25 miles south-westerly from the present terminus of the railroad at Great Salt Lake City, Utah Territory, and consists of nine locations, which define themselves into three separate series of lodes or veins. The reason for the numerous locations on what is evidently but three vein forms, was the desire of the original locators to cover all visible unlocated outcrops, thereby debarring outsiders from making locations in the immediate vicinity pending due development. The canon upon which this property is situated is the largest free gold-producing district in the territory, having yielded within the past three years about 2250 tons. The local development on each of the above series of veins, connected with the fact of finding water in quantity so near the surface, and at elevations one above the other, affords the most positive proof of their true fissure vein form and distinctiveness one from the other.

The Dartmouth Mine contains 1200 lineal feet, and has been explored by an open cut on the outcrop 14 ft. long, 10 ft. wide, and 7 ft. high in mineral. From the face of this cut an incline tunnel is run 24 ft. across the lode. At 15 ft. from the entrance a level is run 50 ft. long, transverse of the vein 6 ft. by 7 ft. all the distance, and at the end still in first-class mineral. At 33 ft. from the entrance of this level another level is run 17 ft. across the regular course of the vein in the same class of ore, and no evidence of termination at the end. Taking the rectangular distances across the course of the vein, the present works have exposed a compact and friable body of argentiferous lead ore, 38 ft. wide, and averaging 54 per cent. mineral. There has been 200 tons of first-class ore taken from the outcrop incline and levels alone, without working stopes or backs. From the enormous size of the vein, and the fact that no blasting is required, the cost of extraction will not exceed \$1 per ton.

The Portsmouth lode has a lineal extent of 1200 ft., and the developments on the same is 500 ft. north-easterly from the openings on the Dartmouth, both being considered a part of one and the same vein. The explorations on this location consist of an open cut on the outcrop, 18 ft. long, 16 ft. wide, and 6 ft. high in mineral, in the centre of which a 6 ft. by 7 ft. shaft is sunk 20 ft. deep, all the distance in mineral; from the bottom of the shaft a tunnel has been run 16 ft. northward, also in mineral. A level is also driven 50 ft. easterly from the bottom of shaft, and at that point turns at right angles across the lode, running 30 ft. to the bottom of old shaft, which is 18 ft. from surface, and all in first-class mineral the entire distance. These developments prove a vein fully 38 ft. wide, of 50 per cent. argentiferous lead ore; 300 tons of this class of ore has been taken from the openings without stoping, 200 tons of which is still at the mine.

The Sturgle location, which is supposed to be on the same vein as the Dartmouth, has a lineal extent of 1200 ft., and has been opened by an incline shaft following the footwall of the lode 34 ft. transverse of the vein, showing a continuous mass of 50 per cent. ore.

The Balsazar Mine contains 1200 lineal feet, and is developed by an open cut on outcrop 34 ft. long and 10 ft. high on the face of cut, exposing mineral on all its sides; from the plane of this cut a 7 ft. square shaft is sunk 20 ft. deep in solid mineral, striking the footwall of the lode, from which point a 7 ft. by 8 ft. incline follows the footwall 27 ft. to the water level. From this incline a level is driven easterly 18 ft., where it turns northerly across the lode 29 ft., showing the width of lode to be about 40 ft. Another level has been driven from the east end of open cut 41 ft., with a vein of tracing connection between this and the Bullion location, and it clearly demonstrates that they are both on the same vein. Out of the open cut, levels, and shaft 250 tons of 46 per cent. ore has been taken, 150 tons of which is still on the mine.

The Bullion location has a lineal extent of 1200 feet, and is developed by a tunnel running transverse of the lode 44 feet; the last 33 feet is in first-class mineral, and at the end of the tunnel the ore runs as high as 72 per cent. lead, with an average quantity of gold and silver.

The Chancery, Onesmus, and Allison locations each contain 1200 lineal feet, but are as yet but little developed.

The Red Warrior Mine contains 1200 lineal feet, and was discovered through running a tunnel to strike the Balsazar and Dartmouth lodes. The vein is 63 ft. from wall to wall, 53 ft. of which is mineral of average grade.

The above data, as to surveys and development is taken from a



lode is larger, and of a better appearance, and produces some good stones of ore. The lode has fallen off in size in the 40, west of Crosby's cross-cut, and is poor at present. In the 30, east of Henry's, the lode is well defined, and presents at this time a good appearance, producing 1½ ton per fathom. The lode in the 20, east of Swaffield's, is small and unproductive.—Shafts and Winzes: San Adriano shaft, below the 60, being off the lode, there is no change to speak of. The lode in San Victor's shaft, below the 40, is still small; it produces a little lead. In Martin's winze, below the 50, the lode is small and poor. The lode in Serrano's winze, below the 50, is large at present, but of no value. Saen's winze, below the 40, is being sunk with all speed, in a very fine lode, yielding 2½ tons per fathom. The lode in Henry's winze, below the 20, is split into branches, yielding ¾ ton per fathom.

FORTUNA.—June 21: Canada Incosa: In the 120, driving west of O'Shea's engine shaft, this end is holed to Callijon's winze, and the lode is small and poor. The lode in the 120, east of the above, is large and kindly, producing some very good stones of lead ore. In the 110, west of the same, we have intersected the lode in this cross-cut, and expect to hole shortly to the 110, west of Henry's shaft. The lode in the 100, west of Henry's, is split into several small branches, and letting out water freely, producing ¾ ton per fathom. In the 80, south of the same, we have not yet seen anything like a lode in this cross-cut. The lode in the 60, west of San Pedro, is large, and the ground favourable for driving, yielding 1 ton per fathom. In the 60, east of the above, this end is without change since last report, still yielding ¾ ton per fathom. In the 90, east of Adult's, there is a good stone of lead in the back of the end; below that the lode is small and poor. The lode in the 60, west of Lowndes', is a little more kindly than it has been for some time past, yielding ¾ ton per fathom. In the 80, east of the same, this end continues to open good ore ground, yielding 1½ ton per fathom.—Shafts and Winzes: In Carro's shaft, sinking below the 70, we have about 9 ft. more to sink this shaft to the 90. In Geronimo's winze, below the 90, we hope to hole this winze to the 100 by the end of this month, producing ¾ ton per fathom. The lode in Dolores' winze, below the 50, is large, composed of quartz and lead ore, yielding ¾ ton per fathom. In Pedro's winze, below the 50, we are making good progress in this sink; the lode continues large and kindly, yielding ¾ ton per fathom.—Los Salidos Mine: The lode in the 110, east of Buenos Amigos shaft, is small, producing stones of lead, but not enough to value. In the 110, west of the same, there is a good stone of lead in the bottom of the end, but the upper part is not so good, yielding ¾ ton per fathom. The 100, west of the same, is without change since last report, still yielding 1 ton per fathom. The lode in the 90, west of San Carlos, is looking better than for some time past, yielding 1½ ton per fathom. The lode in the 75, of the same, is very small, and the ground much harder than it was. In the 100, east of Cox's, the lode is compact and solid, yielding 6 tons per fathom. The lode in the 25, west of Palgrave's, is still large, but not quite so solid as it has been, yielding 2½ tons per fathom. In the 28, east of the same, the lode is small and poor at this point.—Shafts and Winzes: In Palgrave's shaft, below the 25, we have put the new lift to work, and hope now to get on better with sinking, yielding ¾ ton per fathom. In the San Miguel, below the 75, the ground is hard and spare for sinking. In San Pablo, below the 90, we have commenced the sinking of this shaft, and shall try to get it down by the time the 100 reaches it, yielding 2½ tons per fathom. The lode in Pedro's winze, below the 90, has greatly improved in value since last report, yielding 6 tons per fathom. The lode in Carlos winze, below the 75, is regular, compact, and solid, yielding 2 tons per fathom. The lode in Jorge's, below the 90, is much the same of what last reported on, yielding 2 tons per fathom.

LINARES.—June 21: Pozo Ancho Mine: The lode in the 85 fm. level, driving west of Crosby's shaft, is of a promising appearance, consisting of calcareous spar and lead ore, yielding 1 ton per fathom. In the 75, driving west of the same, the lode is getting a little larger, yielding stones of ore. In the 75, west of San Francisco, the ground is disordered, and the lode not so productive as it was, yielding 1 ton per fathom. The lode in the 65, west of San Francisco, has improved a little since our last report, yielding 1 ton per fathom. In the 55, west of San Francisco, the lode is compact and regular, and of a promising appearance, yielding ¾ ton of ore per fathom. In this end of the 45 fm. level, east of San Francisco, the lode is disordered and poor. In the 25, east of San Francisco, there is no improvement.—Shafts and Winzes: In No. 176 winze, sinking below the 65, the lode is small, consisting of carbonate of lime and lead ore, yielding 1 ton per fathom.—Los Onofre Mine: In the 65, east and west of Taylor's engine shaft, no changes have taken place to notice, the men having been engaged in dividing and easing the shaft, and putting in a ladder-way, &c. In the 45 fm. level, west of Taylor's, the lode is compact and regular, looking kindly, and yielding 1 ton per fathom. In the 32, east of the same, the lode is large, letting out water freely, and yielding good stones of lead ore. The lode in the 45, east of Addis', is well defined, and has a very kindly appearance, yielding 1 ton per fathom. In the 42 fm. level, east of Addis', the lode is still large, but not quite so productive as it has been, producing 1 ton per fathom. The lode in the 32, west of Henry's, has fallen off a little in value, but is again improving, yielding 2 tons per fathom. In the 32, east of the same, the ground is hard for driving through, and the lode small and poor. The 32, west of San Carlos, is much the same as when last reported. In the 45, west of the same, the lode is large, consisting of quartz and lead ore, yielding ¾ ton per fathom. The lode in the 45, east of the same, has very much improved during the past week, yielding 1½ ton per fathom. In the 32, east of the same, till the past week the lode looked well, when it again struck into old works, yielding 1½ ton per fathom.—Shafts and Winzes: San Carlos engine-shaft, sinking below the 45, is being pushed on as fast as possible. Martin's winze, below the 32, is going down in a productive lode, yielding 1½ ton per fathom. The lode in Granero's winze, below the 32, is composed of go-san, quartz, and lead ore. The lode in Rafael's winze, below the 45, is quite unproductive at present.

RHINE (Rhenish Prussia).—June 27: Schmelzer: Henry's shaft is rather wet, but the ground, a firm clay-slate, is not bad for sinking through; our progress, however, is rather slow, the men not being accustomed to an engine-shaft; the pump works admirably. Finding the air getting bad in the 17 fm. level ends we have commenced to open, and shall proceed to clear Blubben's shaft, which is 14 or 15 fathoms in depth. The shaft is choked to within 2 fms. of surface; we hope to find it a mere choke, and the shaft in a sound condition below; this when completed will give good ventilation. Ton lode south, in the 17, has recovered its wonted size and character, has fair ground, lets out water, and looks kindly. Schmelzer lode south-east maintains its character, and has good ground for driving; these two ends have not been worked regularly during the last few days on account of bad air: the men have been employed at Blubben's and south shafts, Schmelzer lode north-west is 4 ft. wide, and is composed of friable quartz and killas; its appearance has improved, a kinder lode without ore can scarcely be seen; about 5 fms. further driving will bring the end under Blubben's shaft, with which communication will be effected; this will be pushed forward.—Marlenfreude: Operations have been suspended on Marlenfreude lode, as already advised; the water has been drained from the south shaft. The lode in the level going easterly is, as formerly reported, 6 in. wide, and from it some very good stones of solid lead ore were broken last week; there is, therefore, good reason to hope that we shall find a good productive lode in depth. Fortunately, the water is not nearly so strong as it was last year; the men are now cutting down and securing the shaft for the last 2 fms., when we shall at once fix the hand-pumps, and commence to sink. The transmission of power from the engine to work the pump will stand in abeyance for a little time till it be seen what quantity of water is likely to be encountered.

[For remainder of Foreign Mines see to-day's Supplement.]

WATSON BROTHERS,  
MINING AGENTS, STOCK AND SHARE DEALERS, &c.  
1, ST. MICHAEL'S ALLEY, CORNHILL, LONDON.

SATURDAY.—The principal dealing to-day have been in Grenville, Gwydr Park, Theroft, Carn Brea, Pennerley, Bog, and Cook's Kitchen, Greenville, 6 to 6½; Gwydr Park, 15½ to 20½; Theroft, 52½ to 54; Carn Brea, 137½ to 142½; Pennerley, 4½ to 5; Bog, 3½ to 3½; Cook's Kitchen, 29 to 30; East Van, 10½ to 11; East Lovell, 19 to 20; East Greenville, 3½ to 3½; Great Vor, 9 to 9½; New Victoria, 22½, 6d. to 25; North Crofty, 2½ to 2½; Parys Mountain, 3½ to 2½; Prince of Wales, 21½ to 23; Crebore, 30½ to 35; Roman Gravels, 19 to 20; South Condurrow, 5½ to 6½; Tankerville, 17½ to 18; Uny, 7½ to 8; Eberhardt, 4½ to 5½; Pacific, 23 to 25.

MONDAY.—The market is rather quiet, and in most cases Saturday's prices are not maintained. Carn Brea, 13½ to 14; Great Vor, 8½ to 9; Bog, 3½ to 3½; Greenville, 5½ to 6½; East Van, 10½ to 11½; West Chiverton, 21 to 22; South Roman Gravels, 30½ to 32½; Treleigh Wood, 25 to 30; Providence, 29 to 30; Utal, 20 to 21; Great Laxey, 15½ to 16; Carn Camborne, 3½ to 3½; Crebore, 30½ to 35; Tankerville, 17½ to 18; West Seton, 130 to 135; Theroft, 52 to 54; East Lovell, 19½ to 20½; Australian United, 15, to 20; Thornhill Reef, 32½ to 35; Pacific, 23 to 25.

TUESDAY.—Market quiet, dealers busy preparing for the settlement. Carn Brea, 130 to 135; Cook's Kitchen, 29 to 30; East Van, 10 to 11; East Lovell, 19½ to 20½; Great Vor, 9½ to 9½; Gwydr Park, 17½, 6d. to 22½; Parys Mountain, 3½ to 3½; Theroft, 52 to 54; West Chiverton, 21½ to 22½; Crebore, 30½ to 35; Greenville, 5½ to 6½; Eberhardt, 33 to 34.

WEDNESDAY.—The market is again quiet. Greenville, Gwydr Park, West Chiverton, and East Greenville in demand, at an advance. Greenville, 5½ to 6½; Gwydr Park, 17½, 6d. to 22½; Theroft, 23½ to 23½; East Greenville, 2½ to 3½; Great Laxey, 15½ to 16; New Victoria, 22½, 6d. to 25; Eberhardt, 24 to 26; Uny, 7½ to 8; Pennerley, 4½ to 4½; Bog, 3½ to 3½; Prince of Wales, 21 to 22; Roman Gravels, 19 to 20; West Seton, 130 to 135; Thornhill Reef, 32½, 6d. to 35.

THURSDAY.—Settling day. There has been a fair enquiry to-day for Greenville, Gwydr Park, Eberhardt, Theroft, Carn Brea, Pennerley, and West Chiverton shares. Greenville, 5½ to 6½; Gwydr Park, 17½, 6d. to 22½, 6d.; Eberhardt, 33½ to 37½; Carn Brea, 137½ to 137½; Pennerley, 4½ to 4½; West Chiverton, 25 to 27; Great Vor, 9½ to 10½; East Greenville, 3½ to 3½; Crebore, 30½ to 35; Treleigh Wood, 25 to 30; Tankerville, 17½ to 18; Perkins Beach, 1½ to 2; Parys Mountain, 3½ to 3½; Bog, 3½ to 3½; Theroft, 52 to 55; Thornhill Reef, 32½, 6d. to 35; Pacific, 23 to 25.

FRIDAY.—Market moderately active for Greenville, Theroft, South Crofty, Carn Brea, Parys Mountain, Great Vor, North Crofty, and Cook's Kitchen. Greenville opened 5½ to 6, and close 6½ to 7, in consequence of an improvement in the air above the 100, valued at 14½ per fathom. Theroft, 52 to 55; South Crofty, 17 to 18; Carn Brea, 137½ to 142½; Parys Mountain, 3½ to 3½; Great Vor, 10 to 10½; North Crofty, 2½ to 3½; Cook's Kitchen, 28 to 30; East Lovell, 18½ to 19; Gwydr Park, 17½, 6d. to 22½; Pennerley, 4½ to 4½; West Chiverton, 24 to 25; West Tankerville, 3½ to 3½; and Eberhardt, 36 to 37.

CHEMICALS AND MINERALS.—(Messrs. J. Berger Spence and Co., Manchester, June 28.)—Soda: Cream caustic, at 12½, 10s. to 13s.; white, 60 per cent, 13½, 10s. to 14; soda ash steady, at 2½d. to 2½d.; soda crystals, unchanged at 5½, 10s. to 5½, 15s.; bi-carbonate, 12d. to 12½, 10s.; salt cake, 3½, 5s. to 7½, 6d.; Glauber salts, 3½, 2s. 6d.—Nitrate of Soda: At 14½ to 17½, 2s. 6d.—Potash: Muriates, for 80 per cent., 9½ per cent., f.o.b. would be accepted; potash, 33s. to 33s. 6d.; pearls, 4½s. to 4½s.; Prussiate, red, 2½d. to 2s. 6d.; to 30s.; refined, 23s. to 34s.—Alum: At 6s. to 6s. 6s. for loose lump; in export barrels, 7s.—Bleaching Powder: Easy, at 12½, 10s. to 13s.—Ammonia: White and grey obtain 18s. to 19s.; brown, 14s. to 14½, 15s.; carbonate, 6½d.—Iron Salts: Green and rusty coppers, fair d.m., at 52s. 6d. to 55s. dry copper, 52s.; chlorides of iron, 6½.—Copper Salts: Sulphate of copper, 23s. to 28½, 10s.—Arsenic: At 6s. 16s. to 7s. 6s. for fine powdered.—Acid: Tartaric, unchanged

at 1s. 4d. to 1s. 4½d.; oxalic, 9½d. to 10d.; sulphuric, 31, 10s. to 31, 15s.; carbolic, 1s. 10d. to 1s. 2d.—Magnesia: Epsom salts, 4½, 10s. to 4½, 15s. 6d. for refined.—Oils: Olive, 44s. 10s. to 47s.; pinole, loom, and dense oils, 4s. to 5s. 6d.; pure white Norwegian cod liver oil, 4s. 6d. to 6s. per gallon.—Pitch: Dull, at 13s. to 15s.—Benzole: Active demand; 30 per cent., at 3s. 3d.; 50 per cent. to 90 per cent. at 4s. to 4s. 6d.—Disinfectants: Patent, 5s.; carbolic, 10s.—China Clay: 22s. per ton.—Pyrites: Unchanged, at 7d. to 8d. for Spanish.—Phosphates: Super-phosphates, 25 to 30 per cent., 31, 10s.; precipitated phosphate of lime, 40 to 50 per cent., 31, 10s. to 61, 10s.; Estramadura, 1s. 2d. per unit; mineral phosphates, 55 to 60 per cent., 10½d. per unit.—Manganese: 70s. to 90s. for 60 and 70 per cent.—Iron Ore: Hematite, 19s. to 20s.; oolitic, 6s. 9d. to 7s. 6d.

THE SWANSEA SMELTING AND SILVER MINING COMPANY, CLEAR CREEK, COLORADO.—The prospectus of this company will be found in another column. The company is formed with a capital of \$60,000, in 20,000 shares of \$1 each, to purchase the valuable smelting works known as "The Swansea," as also three silver mines, entitled the "Prince Albert," the "Peabody," and the "Washington," situated at the fork of the Clear Creek, leading to Georgetown and Empire City, the latter place being four miles from the works, and the former only one. The objects of the company are threefold—1. The purchase and smelting of ores raised in the neighboring mining properties.—2. Raising of ores from the company's own mines.—3. The smelting of these ores. Attention is particularly directed to this undertaking, in consequence of its originality, and the security offered to the investor. The speculative element, which is a necessary concomitant of mining, is, it is claimed, replaced by the mercantile element of smelting, which ensures to the investing public a security never before offered to them. The absence of smelting works in Colorado has been so severely felt for some time past that real mining progress has been most materially retarded. There are said to be no other smelting works in the district, and that all ores must of necessity be sent to the Swansea works for reduction. A railway is open to within 26 miles of the works, and this distance will be shortly completed. The mines are stated to be of great value, picked specimens having yielded, by assay, from 1530 to 2000 ozs. to the ton, but the bulk of the lodes will average from 70 to 80 ozs. This is by itself sufficient to pay handsome dividends. It is considered that the *bona fides* of the enterprise are born out on the face of the prospectus, since a subscription of only \$1 per share is asked for, pending the corroboration in all respects of the state-

ments set forth, and even upon the receipt of the most favourable reports it is entirely optional with each subscriber as to whether he will continue his partnership or withdraw, in which latter case there is no liability whatever beyond the \$1 paid upon application. In further support of the *bona fide* character of the property, reference is made to the notice for closing the subscription list, which will show that two-thirds of the shares have already been privately subscribed for.

Many readers of the Journal will recollect the energetic interest displayed by Mr. HENRY GIBSON in reference to the various mining undertakings with which he was connected in Cornwall, Devon, and Wales. They will now be glad to learn that Mr. Gibson is again about to enter into active business pursuits, and that he will, in particular, turn his attention to Anglesea—an island from the riches of which great expectations are entertained.

PARYS MOUNTAIN.—Capt. T. Mitchell (June 29) reports that the 100 east, on S. B. course, is beginning to show a little improvement; the lode is forming more regularly, and producing good stones of copper ore. The 100 cross-cut, driving towards the Carrig-y-doll, is without change since my last. The 90, driving west of cross-cut, on the Carrig-y-doll lode, continues to yield 5 tons of copper ore per fathom. The rise in the back of this level will yield 3 tons of ore per fathom. The 80 cross-cut, driving in the Carrig-y-doll, is also getting into ore ground, and yielding saving work. The 30, east of Dyer's shaft, continues to yield good lumps of ore, and looks kindly. The adit end at Morfaid, driving under the White Rock shaft, is undergoing a favourable change; the end is producing good stones of copper, and looks very promising. All our other works are going well.

HOLLOWAY'S OINTMENT AND PILLS—RELIEF AND REMEDY.—It is useless here to enter into the question how this ointment works so well in curing cases of all descriptions of sores, ulcers, bad legs, and scrofulous eruptions. Sufficient is it for all sufferers to know that the united testimony of thousands proves the healing powers of Holloway's ointment, and earnestly recommends its trial to all afflicted with these maladies. When this treatment is once commenced the ease and comfort it bestows will induce its steady continuance till the cure is completed. In chronic cases the pills used in aperient rather than purgative doses much enhance the curative effect of the ointment.

## The North Pool Mining Company (LIMITED).

Registered under the Companies Acts of 1862 and 1867.

CAPITAL £10,000, IN 5000 SHARES OF £2 EACH.

£1 per share payable on application; £1 upon allotment.

DIRECTORS.

Captain HENRY ANTHONY BENNETT, Nelson House, Manchester, and Junior Carlton Club, London

JOHN GURNEY KELLEY BURT, Esq., M.D., Lee, Kent.

RICHARD DUKE, Esq., Lee, Kent.

JAMES SMITH EASTES, Esq., Billiter-street, City.

(With power to add to their number.)

BANKERS—THE CITY BANK, Threadneedle-street, London.

SOLICITOR—GEORGE FREEBORN, Esq.

SECRETARY—EDWARD JOHN BARTLETT.

OFFICES, -30, GREAT ST. HELENS, LONDON, E.C.

### ABRIDGED PROSPECTUS.

This company is formed for the purpose of purchasing and working a mine situated in the parish of Illogan, in the county of Cornwall, hitherto carried on upon the Cost-book Principle.

The machinery, plant, buildings, &c., on the property are valued at £5000, to which must be added the costly work accomplished in developing the mine—worth at a fair estimate £20,000.

The purchase-money to be received by the vendors is £5000 in fully paid-up shares, leaving £5000 to be expended upon the mine—a sum ample for future vigorous working. These favourable terms have been conceded to the public in consequence of one or two proprietors holding very considerable interests in the cost-book company, upon whom the burden of expenditure has chiefly devolved, added to which great difficulty has been experienced in inducing capitalists to embark in unlimited companies. The unanimous consent to thus part

with the property has been obtained, and sufficient funds raised to pay off every ascertained liability. The leases are granted from Lord Robartes and John Francis Bassett, Esq. (the former is for 21 years from 1871, the latter has a term unexpired of 13 years).

The length of the grant is about three-quarters of a mile, intersected by numerous valuable veins, and immediately to the north of the great belt of lodes traversing the Carn Brea, Tincroft, Cook's Kitchen, and Camborne Vein Mines, and also embracing within its limits the parallel range of lodes which have produced such large profits in the Tolgus mines to the east, and still more recently Seton mines to the west.

Applications for shares may be made, accompanied with the deposit, either to the bankers of the company, the City Bank, Threadneedle-street, London, or direct to the offices of the company, No. 30, Great St. Helens, London, E.C., where prospectuses, reports, and any further information can be obtained.

## The Swansea Smelting and Silver Mining Company (LIMITED).

CLEAR CREEK, COLORADO.

CAPITAL £60,000, IN 20,000 SHARES OF £3 EACH.

Of which only 12,000 will now be offered to the public.

Deposit on application 3s. per share, beyond which amount no applicant will be liable for any other sum until the properties to be purchased have been investigated and the statements of the vendor verified, when the applicant may exercise the option of accepting or refusing his allotment of shares.

DIRECTORS.

## Mining Correspondence.

## BRITISH MINES.

**ASSHETON.**—Wm. Johns, W. Tipton, June 27: We have to-day got through the choke in the 20, west of Maw's shaft, which we were obliged to timber for 30 feet in length, and have now reached the forebreast; within 2 fathoms of the same we have pricked into the side of the level, and found the lode about 2 feet wide, grey throughout; here the former party slipped the lode similar to the eastern level; we shall now commence to work on this course, and be able to give you the value in our next report; we are of opinion there is still another portion of the lode standing south. This level is now opened both east and west of shaft over 62 fathoms, and the lode worth in places 20*t* per fathom; having very foul air in this level, it will compel us to bring down another shaft, which is already sunk to the adit level, and is about 8 fathoms in advance of the present end, and when completed will give good ventilation. There is no alteration in any other part since our last advice.

**BEDFORD UNITED.**—W. Phillips, June 29: Driving by the side of the lode, east and west of the shaft, in the 15*t*, is continued. The lode in the 10*t* west is still 2*t* feet wide, worth 6 tons of ore per fathom. In this level east the lode is 3*t* wide, producing 4 tons of ore per fathom. In the 90 west the lode is 3*t* wide, producing 2 tons of ore per fathom. The winze in this level is at present being sunk under the lode. The stopes in the back of this level is worth from 4*t* to 5 tons of ore per fathom. The lode in the 90 east is 2*t* feet wide, producing 3 tons of ore per fathom. The stopes in the back is worth 4 tons of ore per fathom; preparations are being made for sinking a winze in this level. We are still driving by the side of the lode in the 75 east.—**South Lode:** Driving by the side of the lode is continued. In the 47 east. The pitches throughout the mine are looking much the same as for some time past.

**BLAEN CAELAN.**—J. Evans, June 28: At the engine-shaft the pitwork is now in, and we shall start 20*fms*, levels, both east and west, on the course of the lode forth with from the bottom of the shaft. The lode, so far as seen by the cross-cut north, is looking most promising. The stopes in the 10*t* level, and in back of the adit are yielding their usual quantities of lead ore. The new adit going south continues to intersect branches of spar in highly-mineralised ground, and I should be glad if you would come up as soon as you return from London.

**BLUE HILLS.**—S. Bennetts, A. Gripe, June 24: There is but little alteration to notice in any part of the mine during the week. The water has been taken up in launders in the adit from Wheal Betsy, so that we can now continue the sinking through the old workings below that level at Wheal Joy shaft.

**BOG.**—Wm. Nancarrow, John Lean, June 28: The clearing of the 70 fathom level, both east and west, progresses satisfactorily; we find the stuff therefrom contains sufficient lead and blende to well pay for dressing, therefore we are saving it out on the surface as we draw. The shaftmen have completed cutting ground at the adit level for the house-lift; the bearers and cistern to receive the same are in their places, and we shall send down the castings forthwith. The tribute pitches throughout the mine look much the same as for some time past. We shall sample 20 tons of lead on Friday next.

**BRONFLOYD.**—Thomas Kemp, June 29: We have no change here worthy of notice, as all bargains continue of the value reported last week. I hope to get the new jiggers to work this week, as, until they are ready, we cannot get on with dressing operations.

**BRYNAMBOK.**—G. Sarge, June 28: The engine-shaft is sunk below the 12 4*fms*. 5*t* 9*in*; I have this day broken some good stones of lead ore in the deepest part of the shaft from the soft and north part of the lode, the nature of which is gradually changing, becoming more sparry, which is impregnated with lead, and of a most promising character for the production of galena. I am daily expecting a further improvement. We are now carrying 7*t* of the lode in the shaft, and according to its size where cross-cut in the 12*t*, we have about 12 feet more of it still standing to the south. This will, of course, be cross-cut into as soon as we reach the 22. The lode in the stopes in bottom of the adit level is at present poor, but is still producing a little lead. We have now pick of prills, or solid lead, about 15*cwt*; the remainder of the lode will have to go through a further process of dressing. We are at present engaged in the course of a week. We have completed the excavation of the large reservoir, which is now supplying us with ample water for hauling purposes, &c. The 12*t* west will now be cleared without delay, and when done we shall resume the driving of this level, so as to get under the lead ground gone down in the bottom of the adit. After we have driven another 5 fathoms we shall commence rising and stoping, &c., from this part also, and should the lode continue to improve in accordance with the last 6 feet driven very valuable ground will be laid open. All that is wanted is time to properly open out the mine, when I have every reason to believe it will become remunerative.

**BWADRAIN CONSOLS.**—Robert Northey, June 24: The lode in the 55*fms*. level west is 4*t* wide, composed of blende and mixed throughout with lead ore, but not sufficient of the latter to put any value on. The lode in the winze sinking below the 45*fms*. level is 4*t* wide, and worth 15*cwt* of lead ore per fathom. The lode in the 45*fms*. level west is 5*t* wide, and worth 35*cwt* per fathom. I do not see any change to notice in any of the stopes; they are producing about their usual average. The lode in the deep adit at Dolfawr is about 1*t* 6*in*. wide, composed of killas, and occasionally stones of blende and muriatic. The water is scarce for dressing, but we are carrying it on as fast as possible.

**BWLCH CONSOLS.**—Robert Northey, June 26: Nothing has been done on the lode in Ritchie's shaft since my last. The men have been busily engaged fixing bearers, cistern, pumps, &c. The lode in the 70*fms*. level east is 3*t* wide, and carrying a mixture of lead ore. The lode in the rise in the back of the 70*fms*. level is 2 feet wide, and worth 18*cwt* per fathom. The stopes in the back of the 60*fms*. level will average 15*cwt* per fathom. The lode in the 50*fms*. level is 4 feet wide, and worth 20*cwt* per fathom. The stopes in the back of the 50*fms*. level is 4 feet wide, and worth 17*cwt* per fathom.—**North Lode:** The lode in the 40*fms*. level east is 6 feet wide, composed of killas, quartz, and spots of lead ore. The weather still continues very dry, though we had some passing showers, but of very little service to the pons, which were closed on Thursday last, but we are doing a little on the mine flooring.

**CAEGYNNON.**—T. Hodge, June 28: In the 60*fms*. north cross-cut there is no change worthy of notice. In the 50*fms*. end the lode is yielding some good stones of lead. In the 50 west end the lode is getting more settled, and is worth 6*cwt* of lead per fathom. The rise in back of this level is worth 12*cwt*, of lead per fathom. No. 1 stop, in back of the 50, is worth 15*cwt* of lead per fathom. The lode in the 40*fms*. end continues to yield good stones of lead, with more water issuing therefrom. The stopes in the back of the 40 is not looking so well, worth 8*cwt* per fathom for lead, and a good mixture of blende. We shall commence the 40*fms*. level cross-cut south-to-morrow, with a view to intersect the Kystymear lode. We have a pair of men raising stones to build piers for the support of our main ladder crossing the river Rhedol; when this is completed the men will be put in the 20*fms*. end, on the south lode. I hope to set more tribute pitches in this end soon. Our parcels of ore are not yet weighed; they will weigh off a little over the computed quantity.

**CAMBORNE VEAN.**—J. Vivian and Son, Nicholas Clymo, June 29: Town Lode: The 10*t* west is improving, the lode becoming more consolidated, and increasing in the production of copper. The stopes in back of this level are producing about 2*t* tons of good copper ore per fathom, and improving in going up.—**South Lode:** We have discovered an excellent section of tin ground in the 120*fms*. from which several rocks of very rich tin-stone have been sent to the surface. This is the most valuable discovery we have yet made, and without taking other parts of the mine into account enables us to calculate with safety on making large sales of tin at a profit.—**Old South Lode:** Good tin ground is also being discovered on this lode in the 120*fms*. The prospects of the mine have considerably improved since the last report.

**CAPE CORNWALL.**—Richard Pryor, John Davey, June 27: No change calling for remark has taken place in this mine during the past week. Saturday below our pay and setting a full report shall be sent you.

**CAPPAGH.**—Wm. Thomas, June 24: The plat, &c., at the skip-shaft, the 10*t* is finished, and we have begun to sink to the 11*t* in a promising grey lode, over 8*t* wide, and consisting of rich purple and yellow copper ore, carbonate of lime, quartz, &c. I shall be better able to estimate its value after the men have made a good sinking and taken down the lode—this shaft is being sunk 12 feet long, at 12*t*, 12*in*. per fathom extent for the month. The stopes in back of the 10*t*, west of Killy's winze, is worth 10*t*, per fathom: set at 3*t*, 10*in*. per fathom. The stopes in back of the 10*t*, per fathom; set for the month at 3*t*, 10*in*. per fathom. The end west of the skip-shaft, in the 10*t*, is driven 2*fms*. 5*t* 3*in*. worth 9*t*, per fathom for the part being carried, but all the lode is worth 12*t*, per fathom. Lorden's winze is sunk under the 9*t*, level 6*fms*. 3*t* 10*in*.—set for the month at 9*t*, per fathom; we cannot carry all the lode in sinking this winze, but the part being sunk on is worth about 10*t*, per fathom. All the other underground operations are being carried out in a satisfactory manner. We have now first-class surface plant, consisting of a powerful pumping-engine, steam-whim, crusher, &c., wagons, new skips, new steel wire-rope, tramways, walled in dressing-rooms, and copper yards, with all necessary houses, offices, sheds, and dressing appliances, reservoirs, &c.; also a supply of coals, timber, iron, steel, tallow, grease, oil, and other materials for the next six months, and pitwork sufficient for 12 months, and all surface works being in thorough working order our principal object henceforward will be to concentrate our forces in sinking the main shafts and winzes, and developing the mine in depth, as judging from the improved character of the lode, and also the rock formation in contact with it in sinking the last 10 fathoms, we have every reason to expect still more important results as we sink deeper and open new levels. If we could have the standard of copper again at 12*t*, we should do very well, there being places in the upper levels that may be worked at a profit with a better price for copper, but which at the present price will scarcely pay, so that profits, in fact, depend in a great measure on a fair price being obtained for copper ore. We are preparing another cargo of ore with all possible despatch.

**CEPEN BRWYNO.**—Jas. Pauli, June 28: During the past week scarcely any thing has been done in the bottom of the mine, the water being in; however, the late showers have given us a little water, and the mine is nearly in full work again. All the points in the upper part of the mine are without any change worthy of remark since my report of last week. The surface work is now again being urged on with the utmost speed possible.

**CHIVERTON MOOR.**—G. E. Tremayne, Wm. Bennetts, June 27: The lode in the 11*t* level west, on the new lode, is 2 feet wide, composed of blende and good stones of lead. According to the present bearing of this lode it will intersect the old lode about 45*fms*. west of the shaft; this we hope to accomplish in about five months. The shaftmen are at present engaged in cutting plat at the 11*t* fms. level, which will be completed this week, when we shall at once commence sinking below this level. The lode in the 10*t* level west is 3*t* wide, with a very promising appearance, and producing a little lead; from the present favourable indications we soon expect to reach the lead ground. The lode in the 10*t* level east is 2*t* feet wide, strong, and promising lode, principally composed of blende and muriatic. The lode in the 95*fms*. level west is at present disordered by an eolian course, which we only regard as temporary. The stopes in the back of this level are not looking quite so well as last reported. Saturday next being our pay and setting, a full report will be sent you.

**CRENVER AND WHEAL ABRAHAM UNITED.**—W. Kitto, W. J. Pauli, June 26: Sturt's Engine-Shaft: To drive the 20*t* end west, by eight men, the month, at 2*t*, per fathom; lode 2*t* wide, producing good stones of tin and cop-

per ore, having a kindly appearance for further improvement. Pelly's engine-shaft is cleared to the bottom, which is 5*fms*. below the 220; the sumpter will at once begin to cut ground for a set of catches to take up the rods and to fix a plunger in the 220, preparatory to our sinking the shaft, which will take a month to accomplish. To drive the 130 east of Crenver shaft, by four men, the month, at 4*t*, 10*in*. per fathom; the lode is 2*t* wide, worth 20*t*, per fathom for tin and copper. To drive the 190 west of St. George's shaft, on the old lode, by four men, the month, at 4*t*, 10*in*. per fathom; the lode is 3*t* wide, producing 3 tons of copper ore per fathom.—**Wool's Shaft:** To sink a winze below the 180, by six men, the month, at 5*t*, 10*in*. per fathom; the lode is 1*t* 1*q* per fathom, wide, producing a little copper ore. The 120 cross-cut to drive south, by six men, the month, at 7*t*, per fathom.—**Vivian's Shaft:** To drive the 200 east by six men, the month, at 7*t*, per fathom; the lode is 3*t* wide, producing stones of tin.—**Polly's Engine-Shaft:** The 220 to drive east on the old lode, by four men, the month, at 9*t*, per fathom; the lode is large, producing a little tin. To drive the 210 east, on the old lode, by four men, the month, at 9*t*, per fathom; the lode is from 2 to 3*t* wide, producing low quality tinself. To drive the 110 east on the old lode, by four men, the month, at 12*t*, per fathom.—**Blewitt's Shaft:** To drive the 180 east of the cross-cut, on the south lode, by six men, 1*t*, 1*q*; the lode is 5*t* wide, worth 40*t*, per fathom for tin and copper ore; we have set a short stent here, believing that the lode will get softer shortly. To drive the 180 west of cross-cut, by six men, 1*t*, 1*q*; the lode is not so good as it has been, now worth 15*t*, per fathom.—**Richard's Shaft:** To drive the 170 west on the south part of the old lode, by four men, the month, at 4*t*, 10*in*. per fathom; the lode is from 2 to 3*t* wide, and will produce from 2 to 3 tons of copper ore per fathom. A cross-cut to drive south of Blewitt's shaft, in the 190, by six men, the month, or a lode; we expect about 3 tons, further will reach it.—**Gard's shaft:** To drive the 70 west, on the old lode, by two men and two boys, the month, at 6*t*, per fathom; the lode is 1*t* wide, producing good stones of tin. To drive the 60 cross-cut north, by four men, or cut the lode, at 7*t*, 10*in*. per fathom. To drive the 95 cross-cut south of Willyams's engine-shaft, by six men, the month, at 15*t*, per fathom. To drive the 200 west of Blewitt's shaft, on the old lode, by four men, the month, at 4*t*, 10*in*. per fathom, wide, producing 1 ton of copper ore per fathom, and likely to improve.—**Pressure Shaft:** We have four men clearing the level and winze so as to put down a foot-way, and we hope to see the water drained to the 50 by the end of the month. To drive the 170 east of Blewitt's shaft, on the south lode, by six men, the month, at 15*t*, per fathom; the lode is 1*t* wide, producing a little tin and copper ore, and likely to improve.

**CWMPERFIN.**—June 29: In our last report it was mentioned that we had communicated the 57 west of the engine-shaft with the same level coming east from the winze. This has enabled us to stop the ore ground gone down in the bottom of the 45. We have now eight men employed on this ground, where the lode is 5*t* wide, and worth from 1*t* to 1*t* of lead ore per fathom. The lode in the 45, west of Taylor's shaft, is at this time very small. We have nothing but a joint or wall to drive by, and it must be carefully watched. Its bearing is found to be much the same as it was when the lode was much larger. Good progress has been made in extending this level westward, the men having driven 7*fms*. of ground in the last two months. One stop is in course of working over the back of this level, in which the lode is 9*t* wide, and worth from 8 to 12*t*, of lead ore per fathom. The lode in the 32, going west of Taylor's shaft, is 8*t* wide, composed of killas, carbonate of lime, strongly impregnated with copper and lead ore. Some fair specimens of the latter have been broken since the last report. The stopes over the back of the 32 have been suspended, the lode having become too poor to pay for working. The stopes in the back of the 20, on the south branch, about 90*fms*. east of the cross-cut, will turn out 7*cwt*, of lead ore per fathom, and the ground is easy for exploring. We are extending the cross-cut north in the 10*t* a little further, to prove whether or not there is anything gone off in that direction. In stoping down the north side in the bottom of the deep adit level, we still find some branches of ore that will pay; present value, 8 to 10*cwt*, of lead ore per fathom. We shall sample on Tuesday next 20 tons of silver-lead ore.

**DEEP LEVEL.**—June 27: In the 160, east of sump-winze, on the new vein, the lode is 5*t* wide, producing solid stones of lead ore. The 160, west of sump-winze, is producing occasional solid stones of lead ore. The lode in the 120, west of Trustee's shaft, is rather disordered, producing occasional stones of lead ore. In the 146 north, on Pantyffrith vein, the lode is 12*t* wide, producing saving work of a low quality. The pitch over the 146, on Pantyffrith, will produce 10*cwt*, of lead ore per fathom. The pitch below the 120, west of Trustee's shaft, is worth 14*cwt*, of lead ore per fathom.

**DRAKE WALLS.**—Thos. Gregory, June 28: The branches in the 30, west of Brunton's shaft, are worth 9*t*, per fathom. In the 20 west the branches are worth 8*t*, per fathom, and are again improving west of the capsule. The branches in the 60 west are worth 8*t*, per fathom for tin and copper; there are still more branches standing south, which will be cut into presently. The branches in the 70 east are worth 9*t*, per fathom for tin and copper. In the 80 east the branches are worth 9*t*, per fathom for tin and copper. At Brunton's shaft we are squaring down some ground, in order to complete the shaft to the 80, on the old workings; when this is complete it will enable us to draw more tin-stuff from the west part of the mine.—**Matthews's:** The branches in the 40 east are worth 8*t*, per fathom for the part carried. In the cross-cut south we continue to open on some small tin branches, and as yet it appears we have no south wall. The various stopes are producing their usual quantities of tin, the sampling of which is receiving every attention in due course.

**DRAKE WALLS.**—J. Eddy, June 29: We have sunk a trial shaft near our eastern boundary, and proved the great champion lode of the country for nearly 400*fms*; the lode is from 12 to 15*t* wide, and we are sinking a shaft with all possible dispatch from the adit. The lode here is poor and small, and the end rather slow for progress, re-set to four men, at 8*t*, per fathom—stent the month.—**Smith's Shop End:** At present the lode here is poor and small, and the end rather slow for progress, re-set to four men, at 8*t*, per fathom—stent the month.—**Stopes in Sutton's Shaft:** The lode here has improved, now worth 8*cwt*, of lead ore per fathom; re-set to four men, at 3*t*, 10*in*. per fathom—stent the month.—**Stopes in Owen's Lode:** The lode here has also improved, now worth 10*cwt*, of lead ore per fathom; re-set to four men, at 7*t*, per fathom—stent the month.—**Tyntwyl Mine:** I have set a piece of ground to break through from the bottom of the deep adit to the old workings to open a shaft to draw the stuff through, to four men, at 7*t*, per fathom; I saw some good lead in the ground to-day. There are four other men about 7*fms*. under these men opening for the same shaft; through a stent to communicate with the bottom of the mine. We have done little in breaking lead, but shall put men to do so in a day or two.

**HARMONY AND MONTAGUE.**—Hugh Stephens, June 29: We have not got through the cross-course in the 10, west of Roger's shaft; it is some fathoms wide and the level entirely gone together, which, with the old timber crushed in every direction, makes it safe for spilling through. In the adit we have cleared about 40 fathoms west of where we holed to the old workings referred to in my last, and find the lode standing almost entire. The level is extended beyond this, but we are obliged to suspend our operations for the present in this direction for want of ventilation. The men are now engaged in clearing Butler's shaft, which is the next west of Duncroft's, and when this is accomplished I am in hopes it will thoroughly ventilate the mine all the way to Frederick's, which is the western shaft in the Harmony section of the mine. We have also cleared the adit as far north as Polkinghorne's, and shall commence clearing a shaft on this lode to-morrow. All the works throughout the mine are progressing favourably, laying open additional tin ground, and daily increasing our reserve.

**HINGSTON DOWN CONSOLS.**—J. Richards, June 29: We have reached No. 3 lode, on the west side of the cross-course, where its appearance is much better than it was on the east side; the lode is large, carries a strong flock of blende, and is spindly rock for tin. We are sinking the whin-shaft with all possible dispatch from the adit, and have two stopes that are yielding fair quantities of tin-stuff. We are sinking the whin-shaft with all possible dispatch from the adit, and have two stopes that are yielding fair quantities of tin-stuff. We are sinking the whin-shaft with all possible dispatch from the adit, and have two stopes that are yielding fair quantities of tin-stuff.

**HORNBY PARK CONSOLS.**—W. Smyth, June 27: At Uchesdale new adit, driving west, the lode is about 10*t* in. big, composed of spar, sulphur, blende, and good saving work for lead ore; re-set to four men, at 6*t*, 10*in*. per fathom—stent the month.—**Smith's Shop End:** At present the lode here is poor and small, and the end rather slow for progress, re-set to four men, at 8*t*, per fathom—stent the month.—**Stopes in Sutton's Shaft:** The lode here has improved, now worth 8*cwt*, of lead ore per fathom; re-set to four men, at 3*t*, 10*in*. per fathom—stent the month.—**Stopes in Owen's Lode:** The lode here has also improved, now worth 10*cwt*, of lead ore per fathom; re-set to four men, at 7*t*, per fathom—stent the month.—**Stopes in Tyntwyl Mine:** I have set a piece of ground to break through from the bottom of the deep adit to the old workings to open a shaft to draw the stuff through, to four men, at 7*t*, per fathom; I saw some good lead in the ground to-day. There are four other men about 7*fms*. under these men opening for the same shaft; through a stent to communicate with the bottom of the mine. We have done little in breaking lead, but shall put men to do so in a day or two.

47 west the lode is worth 20*l.* per fathom.—Cobbler's: In the 120 west the lode is worth 12*l.* per fathom.—North: In the 90 west the lode is worth 15*l.* per fm. In the 90 rise the lode will produce 6*l.* per fathom. In the 80 west the lode is worth 6*l.* per fathom. In the 70 west the lode is worth 8*l.* per fathom. In the 60 east the lode is worth 10*l.* per fathom. In the 60 west the lode is worth 8*l.* per fathom. In the 55 west the lode is worth 9*l.* per fathom.—Cardozo's: In the 20 the lode in the shaft is worth 12*l.* per fathom. In both both rises from the 47 and 30, against this shaft, the lode is unproductive. No other changes to report.

PENHALLS.—S. Bennetts, W. Higgins, June 24: The lode in the 70, west end, is 4 feet wide, and worth 2*l.* per fathom. In the stope above this level it is worth 10*l.* to 12*l.* per fathom, and in the stope below the 60, on the south part, it is worth 12*l.* per fathom. The 60, west end, is producing a small quantity of tinstuff. The 55, west end, is also producing saving work. The rise in the back of the 50, east of engine-shaft, is worth 15*l.* per fathom. A stope in the bottom of the 44, on the Pink lode, is worth 10*l.* per fathom. At the Pink Mine, the 50 and 40 fm. level end, continue to produce a small quantity of tinstuff, but not of much value. At Sarah's, the 17, west end, is worth 4*l.* per fathom, and the stope above 6*l.*, 10*l.*, and 12*l.* per fathom respectively.

PENRHYN.—Wm. Johns, M. Whitford, June 25: In the lode in the engine-shaft sinking below the 30, although split up in branches, there seems to be a channel of ground coming in; this change we are very much pleased to see. The lode in the No. 3 shaft is presenting an improved appearance, and is now worth close on 10 cwt. of silver-lead ore per fathom. In clearing up the flat-road shaft below the adit level very good progress has been made during the past month; we hope soon to reach the 30, and seeing that all the lodes have been taken away by the former workers so far, no doubt we shall find something good when the bottom is found. The machinery is in good working order, and the water is easily kept.

PENNERLEY.—W. Nancarrow, J. Delbridge, June 25: In the 130 fm. level, driving east on the Big Ore lode, the lode is 1*1/2* ft. wide, worth 2 tons of ore per fathom. The 120, driving west on Big Ore lode, is worth 2 tons per fathom, and looks kindly for further improvement. In the 80 cross-cut, from Big Ore lode, towards Warm Water, no lode has yet been cut, but we expect it daily. There is no change in the 70, on Big Ore lode, since last week's report. The 60 west, on Big Ore lode, is much as last reported, still producing good stances of ore. The winze in the bottom of this level is worth, for 9*l.* ft. long, 3 tons of ore per fathom. The five stances in the back of the 60, on Big Ore lode, are worth, on an average, 2*1/2* tons per fathom. The two stances in the back of the 50 are worth 1*1/2* ton per fathom. The 40 east, on Warm Water lode, is as last reported—worth 3 tons of ore per fathom. The three stances in the bottom of the 20, on Big Ore lode, are worth 1*1/2* ton per fathom each.—Bland's: In the 44, driving east on Big Ore lode, there is no change since last report. The stope in the back of this level is driving good stances of ore, especially going west.—Potter's Pit: The lode in driving west of the shaft has at present got smaller, but still producing some excellent rich ore towards the bottom of the level, and no doubt will open out again in a very short time. We are still driving the adit level east, on Warm Water lode; at present the lode is poor, but we anticipate a change here for the better soon, judging from the old men's working above. We are sending away the last 6 tons of ore sold, and are getting on well for our next sampling, which will take place in about two weeks time.

PENHALL WHEAL VOR.—W. H. Martin, June 27: The engine-shaft is sunk 8 fms. 4 ft. below the 150 fm. level. In this stope the lode and ground have been very changeable, the lode varying from 1 ft. to 3 ft. wide, composed of blende, mundic, spar, capels, and some good stones of tin. The ground is disseminated with small branches, and letting out water on the north side of the shaft. I consider these good indications for an improvement, both in the main lode and junction.

PERKINS BEACH.—W. Nancarrow, E. Davies, June 29: In the pump stope, sinking below the 20, the lode still continues quite as well as last reported, and bids fair for a further improvement as we get deeper, as the length of the pipe still continues to increase. We have resumed working on the chimney pipe, and find it continues as good as heretofore. We shall go on risingshere until we make a communication with the drivage west in the deep adit level. On No. 2 counter level we have nearly completed the new timbering, and hope in a few days to get the water out and commence sinking the stope below the present bottom, and thereby further develop its value, which we believe will be good. The south cross-cut, towards the great spar lode, still continues hard, but breaks a little better, and lets out more water, which leads us to think we are getting near an intermediate vein. In driving the deep adit level west we are making fair progress, the ground being rather better to cut, and we anticipate entering very soon the ore-bearing ground connected with the chimney pipe rise. Our last sampling of 25 tons is now ready to be delivered as soon as we know the price.

PERRAN CONSOLS.—James Nance, June 29: Flat-rod Shaft: The character of the ground at the shaft is changed to that above, being harder and more genial for tin; the lode has also been more productive since the change, yielding good stones of tin, and worth full 5*l.* per fathom. In the 30 fm. level, west of shaft, the lode is large and very wet, making greatly against the progress of driving; the portion taken down is worth 5*l.* per fathom. In the stope in back of this level the lode is worth 5*l.* per fathom. In the stope in the side of the level the lode is worth 7*l.* per fathom. In the 20 fm. level driving west of shaft the lode in the last few feet driving has been making a much better appearance; every breaking down is showing an improvement; it is now 4*l.* ft. wide, worth 5*l.* per fathom. In stope in side of this level the lode is worth 6*l.* per fathom.—Western Shaft: Great energy is being used in sinking this shaft to get it down to the 20, which we hope shortly to do; the lode is 3*1/2* ft. wide, producing stamping work. The tribute department is progressing steadily and looking kindly.

PRINCE OF WALES.—J. and W. Gifford, June 27: On Talyborth the following day, to the 90, east of cross-cut, by six men, stent 1*fm.* at 10*l.* per fathom; the lode in the present end is 1*1/2* ft. wide, yielding occasional stones of copper ore, but not enough to value, although a very promising end. To drive the 90 west of cross-cut, by six men, 1 fathom, at 8*l.*; the lode is 1 ft. wide, principally capel and quartz. To drive the 77 east, by four men, 1 fathom, by the side of the lode, at 6*l.*; we have not taken down the lode for some time past, but where last pricked into is splendid work for tin. To drive the 77 west, by four men, 1 fathom, and carry all the lode at 10*l.*; the lode in the present end is 3 ft. wide, worth 16*l.* per fathom for copper. To drive the 65 east, by two men, 1 fathom, at 4*l.* by the side of the lode; the lode where last cut into is splendid work for tin. To drive the 55 west, by two men, 1*fm.* at 8*l.*; the lode in the present end is small and poor. To drive the 55 fathom level cross-cut north, by two men, 1 fathom, at 8*l.* 10*l.*; the ground is spare for driving, but not letting out any more water. To sink a winze by the side of the lode in the 65 west, by six men, 1 fathom, at 12*l.* A stope in the back of the 77 west, by four men, at 7*l.* per fathom, for one month; the lode is worth 8*l.* per fathom. The stope in the back of the 65 east, by two men, for one month; the lode is worth 8*l.* per fathom; the lode is worth 10*l.* per fathom. A pitch in the back of the 55 west, by two men, worth 10*l.* per fathom. In the 20, west of Queen's boundary, in the present end the lode is 1*1/2* ft. wide, principally flockan, with occasional stones of silver ore and lead intermixed. The stope in back of this level is worth 15*l.* per fathom.

PRINCESS OF WALES.—S. Foote, G. Rickard, June 29: The lode in the hill, is at the adit level, driving west into the hill, is without any change to notice since last week. We have not as yet discovered any lode in costeaning, but are daily expecting to do so.

POWELL UNITED.—John Trevethan, June 29: The lode in the 72, lowest level, is 4 feet wide, producing 3 tons of ore to the fathom. The winze under the 62 is worth from 3*1/2* to 4 tons per fathom. The stope back of 62 will yield an average of 2 tons per fathom. The lode in the 52 east, coming towards the old workings, has improved within the past week; greater changes are yet expected for the better; this expectation being realised, the value of the mine will be considerably enhanced. This level has been driving for more than two years to get under the old mine, and within the last week we have broken more ore than we had previously seen for the whole distance. We sold on the 9th inst. 30 tons of ore at 11*l.* 17*s.* 6*d.*, and we have to-day sampled 30 tons.

QUEEN.—W. Knott, June 29: The shaftmen have completed bearer holes, penthouse, cutting ground in back of plat, etc., and all is in readiness for the reception of the lift, but we are still deficient of door piece and working barrel, which has been promised time after time, and not having forwarded I have been obliged to put the men back again to drive the 30 fm. level below adit, east of engine-shaft, until we get these things from the foundry, when we shall at once commence sinking below the 30 fm. level below the adit. At Cook's shaft, sinking below the 10 fathom level, under adit, the lode has been taken down since last reported, which is from 18*l.* to 2*1/2* ft. wide, and will yield about 5 tons per fathom. In the 10 fm. level west the men are driving by the side of the lode in the end; value of lode when last taken down was 10*l.* per fathom. The tribute pitches are yielding their usual quantity of copper and mundic.—Silver Department: Bennett's Western Shaft: The lode in this shaft continues its full size, yielding good saving work, but not very rich, at present from which we have broken during the past week five bags of silver ore of moderate quality, and some tons of low-class. In the 10 fm. level, east of Bennett's eastern shaft, the lode in the end is still divided by a horse of ass, that carrying a ladder on the under or footwall, composed of carbonaceous iron, spotted with lead and silver—a very promising branch, and good saving work; the stope in the back of this level are suspended for a week or two, until the shaft is sunk a few fathoms below the level, as it is inconvenient getting away the attie, and I wish to push down the shaft this dry weather as fast as possible. The masons are making fair progress in the buildings for the new amalgamation works.

REDMOOR.—F. Bennetts, June 30: The lode in the 25 west is worth 5*l.* 10*s.* per fathom. The lode in the stope in the western end of the south shaft is worth 6*l.* per fathom. In clearing the old workings on the back of the lode for the new shaft, we have found good stones of tin.

ROARING WATER.—Henry Thomas, June 27: I do not see any change in Grady's lode since I wrote to you on the 20th inst., with the exception of more water flowing from the end.

ROMAN GRAVELS.—Arthur Waters, June 29: At the old engine-shaft the men are making good progress cutting plat and preparing for tramways from the 25 cross-cut east and west to the Roman and Sawpit veins. Seeing the rich lode in the level above, and noticing how the ore is lengthening northwards, we feel sure that the 95 will be found rich directly opposite the shaft. The 80, south of cross-cut, continues to go forward in a good jory lode, a course of ore for 6 ft. wide. We are proud to see the Roman vein opening in this way—getting lode behind the end, which is yielding rich ore stuff. We have six men stripping down the said lode along the bottom of the level here. In the 80, north of shaft, the cross-cut has passed through two divisions of lode, and we think from the indications of the shaft for the present, lest we should cut down the 65 water, which with the present pump, would drive us out of the 60 altogether. We have cleared the 25, north of No. 2 cross-cut, on Roman vein, is in a lode 4 to 5 ft. wide, and rich in lead ore; throughout the ground is hard, but the men stoping the roof behind the said end, in a productive lode. The 65, south of cross-cut, is without change for some time past, going forward to we get to the junction, and we are anxious to push through that point, hoping to drain Corfield's winze dry. No. 1 winze, below the 65, is down about 7*1/2* fms.,

and being 35 fms. south, or in advance of the 60, we have suspended the sinking for the time, and put the men to drive north and south at present depth to cut up the ground between the 65 and 80, which is 15 fms. into two sections for stowing. When these men get under cover the sinking of the winze will proceed as before. The ground is hard, and when the winzes are held to the level below we should like to have room for a goodly number of stoves. Our present mode of opening the ground will admit of this. No. 2 winze, below the 65, south of No. 2 cross-cut, is down 7 fms. 2 ft., and is nearly through the ty of ground, and getting down in a wider and richer lode; we shall soon be into a rich course of ore here. We have six men stoping roof of said level, north of said winze, in a good lode; and four men stoping in the same level, south of winze, in a wide and rich lode.—Corfield's Winze: The 65, north of winze, on Roman vein, is in a course of ore from 5 to 6 ft. wide, improving fast. About 3 to 6 fms. beyond the present we expect to catch the dip of the great lode, which passed through the winze about 7 fms. below the 50, and which is worth 15 tons of lead ore per fathom. We are pushing forward to this point by six men. The 65, south of said winze, is now in a lode which may be called a course of lead, mixed with carbonate of lime, as we like to see it, for 7 to 8 ft. wide, and improving as we advance; this end is being driven by six men. Should this great lode continue from Corfield's south to Stoke's winze, and thence to the shale, and everything seems to point to this, we shall have a wonderfully rich mine. The last-named winze is sunk in or about the centre of the south run of ore ground, and is now 8 fms. below the 50 fathom level. We intend putting the winze 3 fms. deeper, and then drive north and south to open up the ore for stoping. A good lode is to be seen in present bottom, making it certain that between the 50 and the proposed 60, 400 fms. (40 fms. long by 10 fms. deep) of rich ore ground is standing. We are making arrangements for the placing of a 11-in. cylinder engine for winding and pumping at Corfield's. Surface work going on as usual.

ROSE AND CHIVERTON.—S. Michell, June 22: It is very gratifying to me to be able to inform you that we have got everything connected with the new plunger-lift and the new boiler in first-class working order—in fact, nothing can be going on more satisfactorily. The only thing now required is a course of lead, which very probably will be met with shortly. The lode at Foster's shaft continues to produce little, but is still very large, and water proceeding from it more freely, which is a good indication.

ROCHE CONSOLS.—T. Parkyn, June 28: We have sunk the engine-shaft as deep as we can for water; the winze shaft is also down as far as we can go for water, and we are now driving on the course of the lode, which is 9 ft. wide, and contains good work for tin. We have a large pile of tinstuff at the surface, ready for the stamps. The tin dresser is laying down the tin dressing-floors, so that he will be able to dress the tin the moment the stamps are restarted. I have had the tramroad laid down on the woodwork from the stamps to the winze shaft; just at this point I intend to work this lode open, as it is 9 ft. wide, and can be quarried out and sent into the stamps at a cheap rate. The engine is to start on Saturday.

RYDTALOG.—James Dunkin, June 28: In the 25, west of the engine-shaft, we have cut through the lode, which is 1 ft. 6 in. wide, composed of blende, spar, and good stones of lead, and I think as we get further from the slide we shall have a good course of ore. In the 15 west, on new lode, the lode is 4 ft. wide, and will produce 10 cwt. of lead ore per fathom. In the new shaft on this ground is a little harder than it has been; the lode continues of the same size and character, and will produce 7 cwt. of lead ore per fathom.

SOUTH CONDURROW.—J. Vivian and Son, W. Williams, Henry Abraham, June 27: In the 82, west of King's shaft, appearances are improving, and the part which we are driving in for a width of about 6 feet is worth full 10*l.* per fathom. In the 71 west we are carrying a width of 6 ft. of the south part of the lode, which is worth 5*l.* per fathom. In the 61, west of Vivian's shaft, the lode is 3 ft. wide, and worth 4*l.* per fathom. In the same level, east of cross-cut, on the north part of the lode, we are carrying a width of 7 ft. which is worth about 4*l.* per fathom. In the 51, west of Vivian's shaft, the lode is 1 ft. wide, and worth about 6*l.* per fathom. In the 51 cross-cut north, west of King's shaft, the last 18 ft. of the lode cut through is worth, by assay, 4*l.* per cubic fathom, and the whole of the lode has not yet been intersected. We are now engaged in stoping the sides and back of this level, where we find the lode equally valuable, and where, as soon as sufficient room has been made, we shall commence driving east and west, rising and sinking. On Wheal Bassett and Wood's lodes there is no change worthy of notice. The stope and tribute pitches have improved since the meeting of shareholders; and as soon as we get our additional stamping-power to work we shall considerably increase our sales of tin and profits. The erection of the new axle is going on satisfactorily, and within a month we calculate on being in good order for working. The mine never looked so well as at present.

SOUTH DARREN.—J. Boundy, W. H. Boundy, June 26: Setting Report: The 90 to drive west, by six men, at 11*l.* 1*s.* per fm.; the lode in the end is 2*1/2* feet wide, producing a good mixture of lead and copper ore; a more promising looking lode for improvement I have not seen in the mine. The 70 to drive west, by six men, at 10*l.* per fm.; no lode taken down here since the last report, but shall do so as soon as convenient. To sink a winze below the 60, by six men, at 11*l.* per fathom for the whole depth to meet the 80, driving west, as per contract. The 60 to drive west, by four men, at 8*l.* per fm.; the lode is 2 ft. wide, composed of killas, spar, carbonate of lime, lead and copper ore, worth 16*l.* per fm., and looking promising for further improvement. To stop the back over the 70 west, by six men, at 8*l.* per fm.; the lode is 2*1/2* ft. wide, and worth for lead and copper ore 14*l.* per fm. To stop the back over the 70, west from the winze, by six men, at 8*l.* per fm.; the lode is 2 ft. wide, and worth for lead and copper ore 12*l.* per fm. To stop the back over the 70, west from ditto, by two men, at 7*l.* per fm.; the lode is 2 ft. wide, and worth for lead and copper ore 10*l.* per fm. To stop the back over the 60, by four men, at 8*l.* per fm.; the lode is 2 ft. wide, and worth for lead and copper ore 11*l.* per fm. To stop the back over the 50, by five men, at 8*l.* per fm.; the lode is 3 ft. wide, and worth for lead and copper ore 12*l.* per fm. To stop the back over the 50, west from the winze, by two men, at 7*l.* per fm.; the lode is 2 ft. wide, and worth for lead and copper ore 9*l.* per fm. We are getting on as fast as possible with the dressing, &c. The machinery throughout the mine is in good working order.

SOUTH HERDSFOOT.—Wm. Goldsworthy, June 29: We continue to make good progress in driving the 100 east, but there is no change to notice in the character of the ground since my last advise.

SOUTH MERLLYN.—June 29: I have no change to report here since my last. In the back of the 80 yard level, south of shaft, I have set a tribute pitch to four men, at 6*l.* per ton.

SOUTH ROMAN GRAVELS.—R. Waters, June 27: We have cleared and secured the winze-shaft to the adit level, and have commenced to drive north on the lode. We have a large quantity of stuff to clear in the upper levels, which we are sending to surface with all speed. The adit level cross-cut, towards the lode in the 65 west, by six men, 1 fathom, at 12*l.* per fm.; the ground is spare for driving, but not letting out any more water.

TAMAR CONSOLS.—W. Dodge, June 27: I have inspected and set the work in the above mine for some time past, and was there yesterday, in company with Mr. Newton. Since my last visit to the mine a lode has been intersected at the adit end, but as yet it is not cut through; so far as seen (about 2 ft.) it is composed of sulphur, mundic, spar, antimony, and silver-lead ore, altogether a very kindly lode, and one I should think that would improve in depth.

ST. AUSTELL (Iron).—Thos. Parkyn, June 29: We have cleared the shallow level into the lode, and find a level has been driven by the side of the lode for a few fathoms west of the cross-cut. We have cut through the lode, and find it is 18 ft. wide; some splendid rocks of iron have been taken out, and are now lying at the surface. We are now driving west by the side of the lode, and shall cut into it in a day or two, when I fully expect a great improvement, as a good lode was discovered a little west. A more promising lode cannot be seen, and it will make large deposits of iron further west in the hill. I find a winze has been sunk 4 fms. below this shallow level, and the lode is much better, both these levels point to the foot of the hill, and the bulk of the iron makes further in the hill going west. By driving the present adit it will soon reach the ore ground, and will lay open large quantities of iron ore to take away. I beg to say that the hill rises fast, and this shallow level will soon gain 40 fms. of backs.

ST. JUST AMALGAMATED.—R. Pryor, N. Bartle, T. Bennetts, June 27: The various bargains throughout this mine continue just the same as reported on last week. Saturday next being our pay and setting, a full report shall be sent.

TAMAR CONSOLS.—W. Dodge, June 27: I have inspected and set the work in the 10 fm. level from adit level, east of shaft, at this mine there is every indication of the lode being near, and we hope to intersect it now very shortly. This level has now attained about 50 fms. backs, which is a good depth.

WEST DRAKE-WALLS.—T. Gregory, June 28: The shaftmen are now putting down main-roads, fixing standing-lift, &c., which will occupy this week, when the sinking will be resumed by a full force of nine men. The ground being more favourable, satisfactory progress will be made, and we shall lose no time in reaching the 65. We are making satisfactory progress with the rise by the side of the lode in the 54; the lode where pricked into produces both tin and copper, and looks promising. There is no change to notice in any other part of the mine.

WEST ESGAIR LEE.—R. Harvey, June 29: We are going on well with the new engine-shaft, the lode being 3 ft. wide, all stamping work as when last reported. I have put a pare of men again this week to rise to meet the shaft, so that we may get a communication as soon as possible, which I expect to have by the latter part of another week. All surface operations are going on satisfactorily. No other change to report.

WEST JEWELL.—J. Michell, June 29: The clearing and securing of Greene's engine-shaft is being pushed on with all the force that can be brought to bear, and very satisfactory progress is being made; we are now 22 fathoms below the deep adit, and very soon shall reach the 39 fm. level, when no doubt handsome profits will be made. The tribute pitches are looking very well, and everything else in connection with the mine is, I am pleased to inform you, being carried on all right.

you a full report. The rise in the back of the 100 has considerably improved, but we shall not be able to state its value until to-morrow.—*Telegram*, June 30: "The 100 rise worth 140*l.* per fathom."

**WHEAL GAMBLER.**—John Tregay, June 29: We have made good progress in the shaft this week, and expect to get through in the time allotted. We have set one tribute pitch in back of adit, and the men are working with good spirits, getting good wages.

**WHEAL JEWELL.**—A. Bennett, June 27: The produce of the ore this month is about 60 percent. higher than the last sampling. At our setting-day, on Saturday last, we set the pump to sink at 18*f.* per fathom. No. 1 winze to sink at 2*f.* 10*s.* per fathom. No. 1 winze at 3*f.* per fathom; these winzes will yield about 7*t.* to 8 tons of ore per fathom. A sample stone of the ore from one of the winzes, assayed by Prof. White at his laboratory in London, assayed or produced 38*s.* per cent. in the 100 tons of copper. The impression expressed by the competent and practical mining gentlemen of the district is that this mine is likely to equal any copper mine discovered in the county of Cornwall during the last century.

**WHEAL KITTY (St. Agnes).**—Stephen Davey, John Williams, June 24: New Shaft, Pryor's Lode: The ground in this shaft, sinking below the 118*f.* is hard, and slow of progress. In the 118, driving west of shaft, the lode is 2 feet wide, and worth for tin 18*f.* per fathom. In the 118, driving east of shaft, the lode is 1*f.* wide, and worth for tin 9*f.* per fathom. In the 106, driving west of shaft, the lode is 3*f.* wide, and worth for tin 14*f.* per fathom. In the 106, driving east of shaft, the lode is worth for tin 9*f.* per fathom. In the 94, driving west of shaft, the lode is worth for tin 16*f.* per fathom. In the cross-cut driving south of the 94 east the ground is harder, and letting out more water. In the 82*f.* level, driving west of shaft, the lode is 1*f.* 1*s.* wide, and worth for tin 7*f.* per fathom. There is no change to notice in the winze in the bottom of the 84 west. In the rise in the back of the 94 the lode is producing good work for the stamps. —Old Lode: In the 82, driving west of Hoigate's shaft, the lode is unproductive.

**WHEAL LUCY.**—Wm. Harris, June 29: The carbon is looking well, it still retains its productiveness. The old tinner's workings are not more than 4*fms.* to the east of our present workings, and, according to reliable reports, they left a good tin course in the bottom of their old workings that will pay exceedingly well with the present price of tin. I have no hesitation in asserting that at a very early period, with a miner-like development, Wheal Lucy will become a first-class paying property. We are going to sample our tin at the early part of next week, and some of it is good work. I will then report to you its value.

**WHEAL PLENTY.**—Edward Borlae, John Johns, June 29: We are clearing the adit as fast as possible, but we find a larger choke than we anticipated; still we hope to let down all the water in a few days. The tin in course of dressing is looking very well.

**WHEAL UNY.**—W. Rich, M. Rogers, June 24: There is very little alteration in the bottom of the mine since our report of last week. We have put in new condensing work to the pumping-engine, which hindered the drivages for a few days. Our ends are, on the whole, looking better. We will send you a full report next week.

**WHEAL SPARNOR.**—W. Tregay, June 24: In the 55 east, driving on course of lode east of cross-course, the lode produces a little tin, and lets out much water. The ground is getting hard for driving as we get away from the cross-course. No other changes to report.

**NORTH POOL.**—We publish this week a most satisfactory report, and it appears evident that a discovery of value may soon be expected in Ballarat shaft. The new proprietors, for 5000*l.*, obtain full benefit of an expenditure exceeding 22,000*l.* The management is all that can be desired, as a reference to the prospectus will convince; the small capital will, no doubt, be subscribed, affording a vigorous development to a property of sterling worth, situated in the heart of the richest mining district in Cornwall.

**TANKERVILLE.**—According to Capt. Waters' report this week, the lode in the shaft "continues to display riches upon a scale that does seem really wonderful. We never saw such solid ore, taking it altogether, as that drawn from the very bottom to-day." The old lode in the 74 also improves. The returns are being increased.

**PLYNMIMMON.**—The 12*f.* level is still in a fine course of ore, and the five stopes over this level are yielding well. There is now a good supply of water, and as the auxiliary 18-inch engine for pumping and hauling is contracted for to be at work in two months, no further interruptions from dry or frosty weather need be anticipated, but regular returns and profits may be looked for.

**HARLECH SILVER-LEAD, COPPER, ZINC, AND SULPHUR MINING COMPANY (Limited).**—The capital herein is fully subscribed, and Messrs. E. R. Banner and Co., of Roscoe Chambers, Liverpool, have been appointed the produce brokers. The shares are now quoted at 1*½* to 2 prem.

**CARN BREA.**—It is stated that at the next quarterly meeting a dividend of 4*l.* per share will be declared, thereby returning to the fortunate shareholders a substantial interest upon present market value, 140*l.* to 145*l.* From the peremptory orders daily received from influential parties residing in the locality of the mine, it is inferred that a further considerable rise will take place. The healthy position of its tin market indicates another rise in the value of that metal in a few days. The June deliveries of foreign tin were as follows:—Holland, 838 tons; England, 557 tons—an amount almost unprecedented, showing the gradually increasing demand for this metal, which must considerably augment the value of such an extensive tin-producing mine as Carn Brea.

**CHONTALES.**—The successful re-organisation of this company must be very satisfactory to the directors and the large number of shareholders who have supported them. The old company could scarcely have existed much longer. The property was mortgaged for 24,000*l.*, and as the interest was overdue for two years, the trustees of the mortgages had given notice to foreclose, so that the whole would have been lost to the shareholders if a settlement with the former had not been promptly made. The re-organisation of the company enabled the directors to accomplish this, and to obtain capital for working the mines properly. The profit for the three months up to the date of the last advice was about 900*l.*, which was got from the returns of San Antonio and Santo Domingo Mines alone, and with only 12 heads of stamps; while the expenditure includes important operations at the San Benito and San Sebastian Mines, and also towards the erection of additional machinery. With regard to the San Benito West, Mr. Belt states, "The opening out of this mine was one of the objects to be accomplished with the new capital, but we have had the good fortune to do it out of the profits," and he estimates that this mine is now capable of yielding 4000 tons of auriferous quartz monthly. San Benito East is another mine which he says "has been entirely opened out of the profits, and it is a grand addition to our resources. We are busy making a branch tramway from the San Benito West tramway, and when completed we shall be able to send down 1500 tons of ore per month, or even more if required." At San Sebastian they are driving a level on the lode, and Mr. Belt believes if the works here are prosecuted "we shall have a good mine in less than a year." At San Pablo and Consuelo the operations have been re-commenced. The 12 heads of stamps are reported to be working well, and Mr. Belt says, "We have got the standards of the revolving ones up, and the shaft fixed, and expect to announce next mail that they are finished. This is another work being done out of profits." It is expected that by this time the number of stamps in operation is doubled (24), and from steps already taken it is believed they will be further increased to 48 in five to six months hence. As each 12 heads can stamp 1200 tons of ore per month, 48 should stamp 4800 tons; and, assuming the average yield to be equal to the last (rather above 4 oz. per ton), it would give fully 2400 ozs., which, at 3*l.* per ounce, would be 7200*l.* The costs lately have been about 1200*l.* per month; but, supposing them increased to 2000*l.*, it would leave 5200*l.* profit per month, or at the rate of 62,400*l.* per annum, or nearly 1*½* per share. It must be borne in mind that these are but our estimates, and that the average yield may not be so high; still they are founded on fair and reasonable data, and by simply extending the late scale of working in proportion to the power and efficiency of the machinery to be used. We must also add that as more of the company's mines come into full working order still larger quantities of quartz may be treated. The capital of the company is now only 136,000*l.*, without any debts or liabilities, but including a sum available for developing the mines and for machinery of about 18,000*l.* If Chontales were a new undertaking, never heard of in this country before, the shares would be at quite as high a premium as those of the new American companies at present being introduced to the public, and certainly with at least quite as much to justify it.

**PINTO.**—According to an extract from the *Eureka Daily Sentinel* (June 8), the English representative of this company was at the Maryland Mine, at Pinto, on the previous Tuesday, and is entirely satisfied with the purchase. The superintendent has taken possession, and will at once proceed with the work, and as soon as it can be done will erect a mill to crush their own ores. We believe it to be a very advantageous purchase for the company, and we are glad to see English capital so effectually endorsing the value of our mines. The best mining experts of the country have passed opinions upon the mines, and they have all been to the one end, that it is a rich mine, and will last. A letter received from the vendor states:—"I think we are getting up a big thing. I put in another fine mine to the Pinto, simply as I want to make our stock very valuable, and I could secure it by a pressure on my parties here. Mr. Woodhouse assayed samples from 12 places in

the Maryland all put together, and it ran up to 47*s.* per ton; he has not found fault with anyone of my statements. All the mines look well."

**UTAH.**—The total shipments of ore and bullion from Salt Lake City east to Omaha, Chicago, and England, and west to San Francisco, from Jan. 13, 1870, to May 25, 1871, was 9257 tons of ore and 533,854 lbs. of bullion. This is an earnest of what may be expected of the future mineral productions of the country, as it is really the result of only about eleven months of incipient mining, as the shipping of ores and bullion by the Utah Central Railway did not commence in earnest until July 1, 1870.

**PACIFIC.**—The following telegram has just been received:—"The amount required for this month's pay is 8400*l.* The month's tribute has produced \$875*l.*"

\* \* \* With this week's Journal a SUPPLEMENTAL SHEET is given, which contains—Original Correspondence: Birmingham and the Black Country, No. XIV.; Our Coal Supply (S. and J. Bailey); On International Communism; Industrial Tontine System; Patent Laws, and the Working Classes; Improved Jigging Machinery; Phosphatic Nodules of South Carolina (T. L. Phipson); Silver Mining, English and Foreign (C. Penning); Science and the Empiric Art Inseparable in Mining; Utilisation of Mineralised Water; Our Mineral Wealth—What would Society do without it (R. Tredinnick); East Eureka Mining Company (J. H. Armstrong); Improved Stamping Machinery; Marazion District (A. Bennett); Mining in Cardiganshire (S. Trevethan); Terrors Tin Mine; Van Consols and East Van Mines—Foreign Mining and Metallurgy—Mining in Colorado—"Technological Dictionary"—Fatal Boiler Explosions—Swansea Copper Ore Sales—Foreign Mines Reports—Patent Matters, &c.

## The Mining Market; Prices of Metals, Ores, &c.

### METAL MARKET—LONDON, JUNE 30, 1871.

COPPER.	£ s. d.	£ s. d.	IRON.	Per ton.
Best selected .., ton	76	0	0	78 0
Tough cake and tile	74	0	0	75 0
Sheathing & sheets	78	0	0	79 0
Boats	79	0	0	80 0
Bottoms	82	0	0	83 0
Old .....	60	0	0	60 0
Burra Burra .....	76	0	0	76 10 0
Wire ....., per lb.	0	0	9 ¾	100
ubes .....	0	0	10 ½	10 ¾
BRASS.	Per lb.			
Sheets .....	8d.	9d.		
Wire .....	7 ¾d.			
Tubes .....	8d.	10 ¼d.		
Yellow Metal Sheathing ..	6 ¾d.	7 ¼d.		
Sheets .....	6 ¾d.	6 ¾d.		
SPELTER.	Per ton.			
Foreign on the spot	£18	5 0	18 10 0	0
" to arrive ..	18	10 0	—	0
ZINC.	Per ton.			
In sheets .....	24	10 0	—	—
QUICKSILVER (p.bot.)	£ 9 10 0	—		
TIN.	Per ton.			
English blocks ..	£132	0	0	124 0
Do., bars (brls.)	133	0	0	135 0
Do., refined .....	136	0	0	138 0
Banca .....	138	0	0	135 0
Straits .....	132	10 0	133 0	0
TIN-PLATES.*	Per box.			
IC Charcoal, 1st qua.↑	1	8	6 ½	9 0
IC Ditto, 1st quality	15	0	1 ½	6 0
IC Dito, 2d quality.	7	6	1 ½	8 0
IC Dito, 2d quality.	13	6	1 ½	14 0
IC Coke .....	1	4	0	1 ½
IC Dito .....	10	10	0	1 ½
Do., in kegs (rolled) .....	12	0	0	13 0
" (hammered) .....	13	0	0	14 0
Ditto, in faggots .....	15	0	0	16 0
Pig, No. 1, in Clyde .....	2	17	0	3 2
Do. f.o.b. Tyne/Tees	2	9	0	—
Do. Nos. 3, 4, f.o.b. do.	2	6	2	7 0
Railway chain .....	5	12	6	10 0
" spikes .....	11	0	0	12 0
STEEL.	Per ton.			
Swed., in kegs (rolled) .....	12	0	0	13 0
" (hammered) .....	13	0	0	14 0
Ditto, in faggots .....	15	0	0	16 0
English, spring .....	17	0	0	23 0
TIN-PLATES.	Per box.			
English Pig, com. ....	18	0	0	18 2
Ditto, LB .....	18	0	0	—
Ditto, WB .....	19	5	0	—
Ditto, sheet .....	18	15	0	—
IC Coke .....	20	10	0	—
IC Dito .....	28	0	0	30 0
Canada plates, p.ton.	13	10	0	15 0
Ditto, patent shot .....	20	10	0	—
Ditto, at works .....	13	10	0	14 0
Spanish .....	17	10	0	17 15 0
At the works, 1s. to 1s. 6d. per box less.				† Add 6s. for each ×.
Terne-plates 2s. per box below tin-plates of similar brand.				

**REMARKS.**—The past week has not witnessed any great activity in any of our markets, and there has been no particularly marked variation in prices. Buyers have for the moment to a great extent supplied their immediate requirements, but general shortness of stocks in the hands of consumers may probably necessitate a speedy return to our markets. The French are beginning to come forward as buyers, and while a general firmness pervades almost all metals, such as are dealt in on French account exhibit special firmness. A good autumn demand is anticipated, and probably more remunerative prices will be realised. The turn which the markets have taken certainly seems now to favour sellers' interests.

**COPPER.**—The course of our market for some time past has been most satisfactory, the demand has been steady and prices improving; the Chili supplies in addition have shown considerable falling off, and these three circumstances combine to exercise a very favourable influence. Speculation has been comparatively limited, so that our market gathers strength purely from legitimate sources, which will, doubtless, promote prices to a much higher standard. Orders flow in from most parts more freely than hitherto, and for France the requirements are especially good, a large quantity of tongh and other descriptions having been shipped there this week. The general prospects of this metal are better now than for a considerable period, and, with the exception of occasional fluctuations from time to time, prices will unquestionably advance. The present stock may be rather larger of Chili than usual, but with the return of the French trade and the diminished exports from Chili, a reduction will very soon be noticeable. Ores and regulus have been sold at 13s. 9d. to 14s. Chili bars at 67*s.* to 68*s.*, according to brand; Wallaroo, 76*s.* cash; and Burra Burra, 76*s.* English tongh is now generally quoted 75*s.* At the above quotations the quantity to be bought is very limited, and we fully expect further advances to be established before many days have passed. Makers of yellow metal are well off for orders.

**IRON.**—The market for pig-iron in the North of England has been somewhat less active during the week. Prices are quoted at 52*s.* No. 1; 48*s.*, No. 3; 47*s.*, No. 4, not cash. The make is large, but the consumption seems to keep pace with it. At the moment consumers are not anxious to extend their purchases. The continental demand is very good. The Netherlands and Germany are large buyers, and in some instances a speedier delivery than is altogether convenient is pressed for. Forge and foundry descriptions are in request, and as a large number of works for finished iron are springing up, the stimulus which has been imparted to the production of pig-iron will not result in an accumulation of stocks. The market for rails has shown much more activity of late. The expected orders from Russia have begun to come forward, and as it is understood that the railway system in that country is to be very rapidly and largely extended, the demand for rails from this quarter is likely to continue. America, too, continues in the market, and from Australia and other parts of the Continent enquiries are coming forward. The prospects for the second half of the year are, on the whole, satisfactory.

From South Wales we hear that there is little fresh to report.

Sellers exhibit an unusual firmness in upholding their prices, which ordinarily decline somewhat as the Quarterly Meetings approach. This may be taken as an indication that future requirements are expected to be large, and that makers are consequently only awaiting the dawn of more prosperous times than they have of late experienced. The last published report of exports for the week shows that 15,000 tons were shipped away, principally from Newport to San Francisco and New York. The demand for Russian requirements appear to confine itself very much to the North of England, the orders reaching South Wales being at present of but small importance. From Glasgow reports reach us of a continued quiet market in pigs, and a further decline in prices during the week, but the deliveries proving much larger than we expected caused a better feeling, resulting in a considerable improvement. In prices, and a good business has been done at 57*s.* to 57*s.* 3d. cash, and 57*s.* 6d. one month; closing, the lowest price touched during the week, 56*s.* 6d. cash for warrants. Shipments for the week ending June 24, 1871, 19,876 tons; ditto, June 23, 1870, 10,325 tons; increase, 9,951 tons. Total increase since Dec. 25, 1870, 53,092 tons.

**LEAD.**—This metal does not seem to have experienced any change from last week; the demand has not been animated, but sellers are loth to accept lower than the quoted prices.

**SPELTER.**—Holders have evinced a desire to meet buyers' requirements, which has prevented any increase in price being obtained; the market, however, keeps very steady.

**STEEL.**—Steel is dull of sale, and, although the price of Swedish keg is lower than it formerly ruled, it does not produce any effect. German seems quite to have taken its place, being sold still

## THE MINING JOURNAL.

closing 10 $\frac{1}{2}$  to 10 $\frac{3}{4}$ . Pacific, 2 $\frac{1}{2}$  to 2 $\frac{3}{4}$ ; a telegram has been received from Mr. Sewell, the superintendent, announcing that the cost for June was £4000, while the tributaries' produce for the month was £3750. Mineral Hill, debentures 7 to 8, and shares 6 to 8. Sweetland Creek, 4 to 4 $\frac{1}{2}$ . Eberhardt shares have risen 4 $\frac{1}{2}$  during the week, and close 3 $\frac{1}{2}$  to 3 $\frac{3}{4}$ . Birdseye Creek, 2 to 2 $\frac{1}{2}$  prem.; the advices from the company's mines are of the most assuring character. In Brazilian mines the transactions have been few in number, and prices are little better than nominal.

The lead mines have commanded a very fair amount of attention. Van, 54 to 55; the report, which appears in another column, is of the usual progressive and satisfactory character. Pennerley, 4 $\frac{1}{2}$  to 4 $\frac{1}{2}$ ; the lode in the 80 cross-cut has not yet been reached, and the other parts of the mine are looking exceedingly well. Roman Gravels, 19 $\frac{1}{2}$  to 19 $\frac{3}{4}$ ; the mine is opening out well. Bog, 3 $\frac{1}{2}$  to 3 $\frac{3}{4}$ ; the shares have been largely dealt in for investment, and some new stopes have been set in the part of the mine just drained. In clearing up the 70, it is found that the whole of the debris is so largely impregnated with lead and blende that it will have to pass through the dressing-floors. Tankerville, 18 to 18 $\frac{1}{2}$ ; the mine has improved during the week. Perkins Beach is opening out a good mine; the shares are in fair demand, at 1 $\frac{1}{2}$  to 2. Tin has advanced in price, and shares in tin mines are in request. North Roskear, Tincroft, and Carn Brea command considerable attention, the latter closing 140, buyers. Subjoined are the closing quotations:—Bog, 3 $\frac{1}{2}$  to 3 $\frac{3}{4}$ ; East Lovell, 17 to 18; Great Laxey, 16 to 16 $\frac{1}{2}$ ; Great Wheal Vor, 10 to 10 $\frac{1}{2}$ ; Marke Valley, 5 $\frac{1}{2}$  to 6 $\frac{1}{2}$ ; Tincroft, 52 to 54; West Chiverton, 24 to 26; Almada and Trito, 1 to 1 $\frac{1}{2}$ ; Cape Copper, 9 to 10 prem.; Colorado, 6 to 6 $\frac{1}{2}$ ; Don Pedro, 1 $\frac{1}{2}$  to 1 $\frac{1}{2}$ ; Eclipse, 1 $\frac{1}{2}$  to 2; Port Phillip, 4 to 4 $\frac{1}{2}$ ; Sierra Buttes, 4 to 4 $\frac{1}{2}$ ; St. John del Rey, 28 $\frac{1}{2}$  to 29 $\frac{1}{2}$ ; United Mexican, 4 to 4 $\frac{1}{2}$ .

At the Swansea Ticketing, on Tuesday, 2040 tons of ore were sold, realising 21,933 $\frac{1}{2}$  lbs. The particulars of the sale were—Average standard for 9 per cent. produce, 89 $\frac{1}{2}$  lbs. 6d.; average produce, 16; average price per ton, 10 $\frac{1}{2}$  lbs. 6d.; quantity of fine copper, 326 tons 8 cwt. The following are the particulars of the last two sales:—

Date. Tons. Standard. Produce. Price per ton. Per unit. Ore copper.

June 13, 2440 .... £87 19 6 .... 16 $\frac{1}{2}$  .... £10 12 7 .... 13s. 2d. .... £65 17 0

27. 2040 .... 89 8 6 .... 16 .... 10 15 6 .... 13 4 .... 67 7 6

Compared with the last sale, the advance has been in the standard 17. 9s., and in the price per ton of ore about 5s. There will be no sale on July 18.

The SWANSEA SMELTING AND SILVER MINING COMPANY has been formed, with a capital of 60,000 $\frac{1}{2}$ , in shares of 3 $\frac{1}{2}$  each, to purchase and work the Swansea Smelting Works, and certain valuable silver mines in Clear Creek county, Colorado. There can be no question that much ore that could be profitably worked in the vicinity of smelting works capable of extracting the metal at a low price would not be worth raising at all for sending to a distant market, only to be reached by incurring heavy expenses for carriage, and it is upon the consideration of these facts that the present company has been formed. It is proposed to mine for and to purchase ores, and to reduce and smelt the ores so acquired, as well as to carry on the business of a "custom mill"—that is, to treat ores belonging to other persons for an agreed consideration; these operations usually return large profits, and the company claims to possess unusual facilities for carrying them on. The property is held on a tenure similar to freehold, and is situated between the forks of Clear Creek river, where there is a constant and inexhaustible supply of water-power and wood for fuel. The mines comprise the Prince Albert, the Peabody, and the Washington, the composition of the lodes being described as similar to that of the richest silver mines of the district. Selected samples of the ores from each have given by analysis from 1530 to 2000 ozs. of silver to the ton, but average samples from the whole mass of the Prince Albert lode gave 70 ozs. of silver to the ton. The purchase-money is fixed at 35,000 $\frac{1}{2}$ , of which 27,000 $\frac{1}{2}$  is to be in paid-up shares and the remainder in cash. The form of applications are so arranged that applicants may withdraw if not satisfied with the report in confirmation of the vendor's statements. The prospectus will be found in another column.

The MALPASO GOLD WASHING COMPANY, with a capital of 30,000 $\frac{1}{2}$ , in 17 shares, is in course of formation for the working of extensive auriferous gravel deposits in the State of Tolima, South America. The Malpaso deposits are described as being over three miles in length, with an average breadth of 430 yards and an average height of over 70 yards, the whole containing a comparatively large percentage of gold, evenly disseminated, although the lower beds yield the precious metals in coarser grains, and in greater quantity. For more than 10 years these deposits have been worked at a clear profit of nearly 100 per cent., and by the primitive, inefficient, and expensive method now in use—sluice and pan washing. It is proposed to introduce the hydraulic process for gold washing, by means of which deposits in California formerly found too poor for remunerative working with the ordinary methods have been made to yield the most extraordinary profits. A strong conviction is expressed that very great results may be fairly anticipated when the same process is brought to bear upon deposits now yielding nearly 100 per cent. profit by the rude system at present adopted. The purchase of the auriferous deposits (extending over 470 acres), with canal and all buildings and plant thereon, is to be completed for 20,000 $\frac{1}{2}$ , in fully paid-up shares, one-half of which is to be retained by the company until 20 per cent. in dividends has been declared.

The NEW WHEAL CHARLOTTE MINING COMPANY, with a capital of 10,000 $\frac{1}{2}$ , in shares of 2 $\frac{1}{2}$  each, has been formed for the development of the mine of the same name, situated in the parish of St. Agnes, Cornwall, which is considered to be one of the richest mining districts in the county. It is mentioned that the surrounding mines have given immense profits, Great Wheal Town having given 200,000 $\frac{1}{2}$  in dividends, and Great Wheal Charlotte, on an outlay of a few hundreds of pounds, 50,000 $\frac{1}{2}$ ; and that the whole of the ground between these two mines is included in the sett of the present company. In addition to the copper lodes there are also fine tin lodes of great promise, which eminent miners predict will be equally profitable. Capt. S. Harris, of Great Wheal Vor, reports that, on looking at the position of the mine, and the congenital character of the ground, together with the number of lodes, and the cross-course intersecting them, he has great confidence in the undertaking, and fully believe it will ultimately turn out eminently successful. Captain Isaac Richards, of Devon Great Consols, reports that the ground is of the same congenital character as that of all the productive mines in the district; and Capt. J. Juleff, of West Chiverton, considers it a fine piece of unexplored ground, which can be proved with a small capital, and he believes successfully. Of the 5000 shares of which the company consists, 800 are to be allotted to the public; and the agent reports that below, and in the 40 fm. level, the lode is 7 ft. wide, of the most promising description, producing tin throughout, and that a very small improvement in its present value would lay open an immense quantity of valuable tin-stuff.

An influential company has been formed for working the valuable run of tin mines at St. Stephen's, St. Austell, Cornwall, known as the BLENCOE CONSOLS, under the chairmanship of Mr. N. G. Lambert, M.P. Mr. M. E. Jobling has been appointed managing director, and Mr. William Battye, Great Winchester-street, is the secretary. An engine-house is being built, to receive a powerful steam-engine, already purchased. Some good discoveries have been made, and the operations are being carried on with great activity.

The WESTERN ALLIANCE FIRE OFFICE has been incorporated with

limited liability, and a capital of 100,000 $\frac{1}{2}$ , in shares of 2s. 6d. each, for the purpose of further facilitating and cultivating in the Western Counties of England the practice of insurance against loss or damage by fire of merchandise, buildings, farming stocks, &c. The principal offices will be in Plymouth, but it is intended to have branches and agencies in all the principal centres of business throughout the United Kingdom. It is mentioned, as an evidence that there is ample room for a new fire office, that at the present moment there is more than 3,000,000,000 $\frac{1}{2}$  worth of insurable property of the United Kingdom remaining unprotected by insurance; and it is thought now that the duty has been entirely abolished a larger accession of business cannot fail to flow into the offices, and that the provident classes will more generally adopt the wise precaution of protecting their property from loss or damage by fire. It is promised that the transactions of the Western

Alliance Fire Office shall be distinguished by the utmost liberality in dealing with the insured, the prompt settlement of claims, and economy consistent with efficient management. Fire insurance is referred to as one of the very best channels for permanent investment, the County Fire Company having paid 40 per cent. dividend and bonus; the Essex and Suffolk, 30; the Imperial, 20; and the Law, 12 per cent. The shares are made of small amount, with a view to secure the influence and co-operation of numerous proprietary.

The following dividends have been declared during June:—

Mine.	Per share.	Amount.
Van	0 12 0	£9000 0 0
Great Laxey	0 6 0	4500 0 0
Phoenix	7 0 0	5300 0 0
Herdsfoot	1 10 0	1350 0 0
Foxdale	0 10 0	1400 0 0
West Wheal Seton	2 10 0	1900 0 0
South Condurrow	0 2 6	785 7 6
Wheat Russell	0 1 0	600 0 0
Providore	0 10 0	550 0 0
Wheat Mary Ann	0 10 0	512 0 0
Rosewall Hill and Banson	0 1 6	440 3 6
North Crofty	0 1 6	420 15 0
Spearn Moor	1 0 0	242 0 0
Port Phillip	0 1 0	500 0 0
Almada and Trito	0 0 9	4533 6 8
Colorado Terrible	0 1 6	1575 0 0
Total		£35,634 12 8

At Spearn Moor Mine meeting, on Monday, the accounts showed a credit balance of 2461. 11s. 7d. A dividend of 242 $\frac{1}{2}$  (1 $\frac{1}{2}$  per share) was declared. Capts. James Bennets and Charles Ellis say—"We calculate to get the usual quantity of tin for the ensuing four months." Messrs. Samuel Higgs and Son, the purisers, say—"We have changed the boiler of the pumping and stamping engine, and are progressing well with the steam winding engine."

At Providence Mines meeting, on Wednesday, the accounts for the three months ending April showed a credit balance of 6911. 4s. 5d. A dividend of 550 $\frac{1}{2}$  (10s. per share) was declared, and 131 $\frac{1}{2}$  4s. 5d. carried to credit of next account. Capts. Hallow, Rogers, and Martin, reported that they intend in the ensuing quarter to drive the 150 fm. level; at that depth the ground does not appear to be disordered, and the granite is much the same as it is above the 80, where the lodes and deposits have been so productive. On the whole, the mine is looking well; they continue to employ the full number of hands, rather increasing underground, and with fair prospects of increasing the quantity of tin.

COAL MINE—TWENTY ACRES—SHAFTS SUNK, and all NECESSARY MACHINERY on the ground, now in working order. Land intersected by a branch of the London and North-Western Railway. Vendor will sell half or a quarter of his interest—price of half, £700; and of quarter, £350. This is no speculation.

Apply to BELL WILLIAMS AND SON, Land Agents, 40, North John-street, Liverpool, who have examined the mine.

REQUERED, for a SLATE QUARRY in NORTH LANCASHIRE, AN EFFICIENT CARPENTER, accustomed to MINE OR QUARRY WORK.

Address, with full particulars of ability, wages, and references, to Mr. EDDY, Skipton, Yorkshire.

A GENTLEMAN, having good City Offices, and who for many years has been intimately known in connection with the Rail and Bar Iron Trade, wishes to ADD to his PRESENT BUSINESS of IRON MERCHANT the LONDON AGENCY of any GOOD WORKS, either on the East Coast of England or elsewhere.

Any communication to be addressed to "A. B.," Stationers, 14, Wilson-street, Finsbury, E.C.

SECRETARY AND MANAGER FOR A SLATE QUARRY.

WANTED, for a SLATE QUARRY, now in full operation, a GENTLEMAN who is fully adequate to UNDERTAKE THE DUTIES incidental to the above offices, and to be responsible, with the aid of a clerk, for the books and cash departments. His character must bear the strictest investigation, and he must be prepared to find security. Salary, £150 a year, with residence.

Apply by letter, in own handwriting, with copies of testimonials, to "G. M.," MINING JOURNAL Office, 26, Fleet-street, E.C.

WANTED, in the City, a GENTLEMAN of INFLUENCE to ACT as SECRETARY to a FIRST-CLASS FREEHOLD MINING COMPANY. One already acting in that capacity will be preferred. Address, "Agent," MINING JOURNAL Office, 26, Fleet-street, E.C.

WANTED, an UNDERVIEWER, at a large Colliery in the SOUTH YORKSHIRE DISTRICT, working the Barnsley Seam of Coal, and raising over 200,000 tons a year.

Apply to Mr. T. W. JEFFCOCK, 18, Bank-street, Sheffield.

WANTED, a GOOD SECONDHAND 85-in. cylinder PUMPING ENGINE, from 10 ft. to 10 $\frac{1}{2}$  ft. stroke, with or without two Cornish boilers.

Lowest price, and where to be inspected, to be forwarded to Messrs. JOHN HOCKING AND SON, Engineers, Trewirgile-terrace, Redruth.

WANTED, a GOOD SECONDHAND CONDENSING ENGINE, for PUMPING and DRAWING; cylinder from 25 to 30 inch. Address, stating particulars, T. HUGHES, 59, Seel-street, Liverpool.

WANTED, a GOOD SECONDHAND CORNISH PUMPING ENGINE, cylinder not less than 36 inches, stroke 9 feet. Address, DALTON HEMATITE MINING COMPANY, Ulverston.

WANTED, a PAIR of new or second-hand UNDERGROUND HAULING ENGINES, from 16 in. to 20 in. diameter, and from 3 ft. to 4 ft. stroke, winding gear complete, to be delivered at Neath Station.

Particulars, with price, &c., to be sent to NEATH ABBEY COAL COMPANY, Neath, Glamorganshire.

CRENNER AND WHEAL ABRAHAM UNITED MINES COMPANY (LIMITED).

WANTED, a SECOND-HAND STEAM WINDING-ENGINE from 30 to 36-inch cylinder, with BOILERS complete. Tenders to be forwarded to Mr. GEORGE H. CARDOZO, the secretary, 15, New Broad-street, London, E.C.

PEDN-AN-DREA UNITED MINES.

WANTED TO PURCHASE, for cash or next account, THIRTY SHARES in these mines. State lowest price and terms, to the London Stock and Share Agency, 165, Strand, London.

SECOND-HAND DOUBLE-HEAD RAILS FOR SALE—a large parcel, in first-rate order.

Apply to "N. P. C.," 20 $\frac{1}{2}$ , Great St. Helen's, London, E.C.

FOR SALE, FIVE HUNDRED YARDS OF PERMANENT WAY RAILS, 72 lbs. per yard, with FISH-PLATES, CHAIRS, and SLEEPERS complete, suitable for Colliery Sidings; also TWENTY TONS OF FLAT-BOTTOM TRAM RAILS. Apply to FIELD'S MERCANTILE COMPANY (LIMITED), SHREWSBURY.

ON SALE, a 50 in. cylinder PUMPING ENGINE, in good working order; also, all the PITWORK, comprising three lifts, a 12 in. and a 14 in. column.

Apply to THE BROUGHTON COAL COMPANY, near Wrexham.

ON SALE, a LOCOMOTIVE four-wheeled TANK ENGINE. It is equal to new, and worked about 18 months. TO BE SOLD, CHEAP.

Apply to W. CLARK, 25, Providence-place, Rochdale-road, Manchester.

BOG AND PENNELL RLEY.—These shares will soon command much higher quotations. Buying or selling orders promptly executed at close market prices by Messrs. W. MARLBOROUGH AND CO., 29, Blasbysgate-street, Within, London.

VAN MINING COMPANY (LIMITED).—Notice is hereby given, that the Directors have THIS DAY DECLARED A DIVIDEND of £9000, being TWELVE SHILLINGS PER SHARE on the 16,000 shares in this company, PAYABLE on and after the 11th day of July next.

The Transfer Books will be closed from the 4th until the 12th day of July next, both days inclusive.

By Order, W. J. LAVINGTON, Secretary.

14a, Austinfriars, E.C., June 29, 1871.

LEAD MINING IN WALES.

WEST RHOSWYDDOL MINE is situated a FEW MILES from the town of MACHYNLLETH, and is locally considered to be a PROPERTY of HIGH PROMISE.

Peculiar interest is attached to it by reason of its immediate proximity to a number of the most valuable mines of the district, amongst which Dylife, Rhoswyddol, Cwmbyr, and Cae Conroy are the most noticeable; nearly all the lodes traversing these sets, and from which their valuable returns of ore are procured, converge in West Rhoswyddol sett, and at their junctions are expected to make great deposits of ore.

Messrs. LISCOMBE and CO., Sharebrokers, 29A, South Castle-street, Liverpool, STRONGLY RECOMMEND the PURCHASE of these SHARES.

THE SWANSEA SMELTING AND SILVER MINING COMPANY (LIMITED).

More than two-thirds of the shares have been already privately subscribed for, and the LIST will be CLOSED on WEDNESDAY NEXT, July 5.

ZINC AND LEAD ORES.

I BUY at the HIGHEST PRICES:—

BLENDE.—CALCINED and RAW CALAMINE (carbonate or silicate).

LEAD ORES.—LEAD-SILVER ORES.—SILVER ORES.

ZINC AND LEAD ORES MIXED TOGETHER.

SILVER LEAD in a rough state (containing antimony, &c.)

SULPHATE OF LEAD, &c.

I BUY any quantities, however large, contracting for as many years as desired. Particulars by letter.

ARMAND FALLIZE, Ingénieur, à Liège (Belgium).

EAST VAN MINING COMPANY (LIMITED).

15,000 Shares of £5 each, fully paid.

DIRECTORS.</

## GOLD AND SILVER MINING.

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## TRANSACTIONS

OF THE

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With Thirty-eight Tables, Thirty-one Engravings on wood, and Six Plates.

Consisting of Observations by

WILLIAM JORY BENWOOD, F.R.S., F.G.S.,

President of the Royal Institution of Cornwall.

## PART I.

On the Metalliferous Deposits of Kumon and Gurhwal (India); on the Silver Mines of Chancillo, and the Copper Formations of Copiapo (Chili); on the Gold Mines and Detrital Gold of Minas Gerais (Brazil); on the Auriferous Deposits of Virginia, and the Mines of Native Copper near Lake Superior (United States); on the Metalliferous Rocks of New Brunswick (British America); on the Copper-bearing Sandstone of Hurdrobo (Spain); on the Silver Lodes of Chalanches (France); and of Sark (Channel Islands); and on the Copper Mines of Ireland, and on the Precipitation of Copper from Mineral Water in Ireland, Wales, England, Spain, and Cuba; on the Auriferous Rocks and Detrital Gold of Ireland and North Wales; on the Ores of Chrome and Molybdenum in Scotland; on the Tin, Copper, and Lead Mines of Caradon and Liskeard (East Cornwall).

## PART II.

On Subterranean Temperature in various Rocks and in Mines affording different Metals and Ores, in Chili, Brazil, the United States, the Channel Islands, Ireland, and England; and on the Changes of Temperature which take place at the same, and at different times, on the surface, and at various depths in Brazil.

Messrs. TRUBNER and Co., Paternoster-row.

## NOTICES TO CORRESPONDENTS.

MINING EXCHANGE.—We have received several advertisements and letters respecting the approaching dissolution of the Mining Exchange, but they are of such an exceedingly personal nature, and would be so unnecessarily offensive to one gentleman connected with it, that we have decided not to insert them. If the holder of an office which is filled by election be an unpopular person it is obviously the fault of those who gave their vote, and the vote having been given the voters should not complain of the consequences of giving it. We cordially wish to see the Mining Exchange established on a firm and honourable basis, and when we feel sure it would be useful and enduring. For the attainment of this it is essential that every member should willingly submit to the rules of dealing laid down for the guidance of the body, and should strive to give the public such confidence in the institution as shall ensure the majority of the business connected with mine share dealings passing through their hands.

MINERAL HILL.—Can any of your correspondents inform me how it happens that the Mineral Hill Mines, purchased for 450,000£, only extend to 1500 ft., as stated in the prospectus and reports? When this property was offered by Mr. Harpenden, two months ago, it was stated to contain 29,200 ft., so that it would appear the company have only got 1/17th part of the property. How can this be accounted for?—INQUIRER.

“One Interested” can, we believe, obtain a purchaser for his shares in the mine he mentions. He should apply to a mining broker.

ROAD LOCOMOTIVES.—With reference to the discussion of the restrictions on the use of road locomotives, I cannot at all admit that it would be desirable to place animal traction and steam traction on the same footing, but I think a speed of five miles per hour might be permitted, and that the man with a red flag walking before the vehicle might be dispensed with.—R. L.

LONDON STREET TRAMWAYS.—Can any correspondent of the Journal inform me the relative speed of omnibuses running on the ordinary roadways and on the tramways, also the relative amount of work done by a pair of horses with each kind of traction? When a tramway is laid down has the tramway company or have the ratepayers to keep the road in repair? Of course, I mean the portion paved between and on each side of the rails.—F. W. Received.—“A Reader” (Bombay)—“M. E.”—“Viator”—“T. W.”—“J. G. R.”—“T. C.”—“E. B.” (California)—“J. H. J.”—“D. G.” (Airdrie).

SCALE FOR ADVERTISEMENTS.—Our charge for general advertisements is—for six lines and under, 4s.; per line afterwards, 8d. Average, 12 words per line.

THE MINING JOURNAL,  
Railway and Commercial Gazette.

LONDON, JULY 1, 1871.

## THE MINES REGULATION BILL.

## SAFETY-LAMPS, &amp;c.

It would appear as if the Mines Regulation Bill stands a great chance of being shelved for another year at least, notwithstanding the great trouble and expense that have been incurred by the colliery proprietors and the representatives of the working miners throughout the kingdom in obtaining and classifying such information as they believed would tend to evolve a measure giving increased security of life to those engaged in the most dangerous of our great industries. For more than two years past masters and men have been engaged in preparing clauses and amendments, meeting in London, waiting upon the Home Secretary, and by the aid of Lord ELCHO and others, endeavouring to come to an agreement on certain particulars, with a view to facilitating the progress of the Bill through the House of Commons; and it is certainly most disheartening to find that their efforts are likely to be thrown away. Measures of far less importance than the Mines Regulation Bill—many of them from their political bias meeting with a good deal of opposition—have been persistently discussed night after night, whilst one in which the question of the sacrifice of 1200 lives annually is immediately involved has only been formally introduced, whilst Mr. BRUCE said a few nights since that he could not name a day when the clauses could be taken into consideration. Admitting, however, for the sake of argument, that the business in the House of Commons was such as to prevent the Home Secretary from introducing the Bill at an earlier period of the session than he did, surely there was no substantial reason why it could not have been sent to the House of Lords, and from there to the Lower House, which is by no means an unusual circumstance. There are a large number of peers interested in mining operations, including the Duke of DEVONSHIRE, the Marquises of WESTMINSTER and ANGLESEY, and the Earls GRANVILLE, FITZWILLIAM, DURHAM, WARD, LONSDALE, MANVERS, &c., who would have been able to form the Bill into a shape that would have saved the Commons a great deal of time and discussion. That is now out of the question; and although some of the leading members of various Miners' Associations have been in London during the present week, in expectation that the Bill would be brought forward, or will be so early next week, it is more than probable that they will be doomed to disappointment, and the sanguine hopes they entertained, after their persevering labours, extending over such a length of time, completely frustrated.

The important clause making the weighing of coal by the standard weights of the country compulsory is one that has cost the South Yorkshire Miners' Association alone some thousands of pounds, and its being adopted in all districts throughout the country was looked forward to with the deepest interest. Such was also the case with regard to the age at which boys were to be allowed to work full time in collieries. The latter, however, much advantageous in an educational point of view, would have a serious effect with regard to the thin coal collieries, and would have led, it is believed, to several of them being entirely closed.

The question of safety-lamps has been warmly taken up of late, in a great measure owing to the efforts of Mr. HANN, of Hetton, the object being to have all lamps tested and registered. At the last meeting of the South Yorkshire Miners' Association the following resolution was agreed to on the subject:—

“That the delegates be sent to the next council meeting prepared to pass a

resolution in favour of urging the Government to insert a clause in the Mines Regulation Bill, making it compulsory for all lamps used in mines to undergo a thorough scientific as well as a practical examination by men appointed for the purpose before any lamp or lamps be allowed to be used in fiery mines, as it has been proved in recent years that many explosions have taken place from the Davy and other lamps now in use.”

Mr. HANN states that several clear cases of explosions from the Davy lamp passing the flame have happened when some one or more survived, for at least a few hours, and who gave their testimony as to this cause. The first on record was at the Wallsend Colliery, G Pit, Aug. 5, 1818; next, the Wellington Colliery, 1834; Newbottle, Jane Pit, 1844; Crammam Pit, Aberdare, May 20, 1865; see report for that year on South Wales district by H. M. Inspector of Mines, Mr. T. E. WALES. And in 1835 the coal masters and miners of Staffordshire addressed a petition to Parliament, from which the following is extracted:—“Your petitioners, therefore, humbly pray that some legislative measures may be provided, appointing a scientific board to examine all lamps intended to be offered for sale to the public as safety-lamps to be used in collieries, and to direct the stamping of all such as they shall approve, and to prohibit the sale of any as safety-lamps which shall not be so approved. Any inefficiency of the lamps for resisting the action of inflammable air must produce the calamitous event of an explosion. As the powers of all lamps for resisting the action of inflammable air may be fully and completely examined and proved by chemical tests, which may be conducted by skilful and qualified persons appointed by the Legislature, whose trial will remove all doubt on this important point.” The above accidents are startling warnings to both miners and mine owners. The reader may also refer to the report of the South Shields Committee (1842), who gave several conclusive instances of the kind, and who came to the conclusion “that the Davy lamp was absolutely unsafe;” “that it has been found by experiment and in practice to explode the external gas by the passage of flame through the gauze;” and that “no doubt can remain that it has been the cause of the hitherto unaccountable accidents which have occurred.” Mr. DARLINGTON also says (1852):—“There are numerous instances of accidents taking place that we could attribute to nothing else,” and terms it “a lure to danger.” Sir H. DAVY warned those who use his lamp that it will explode at a certain velocity. And the experiments of the committee appointed by the Northern Mining Institute, 1853, have confirmed the original statement, see proceedings in June, July, and Aug., 1853; and also still more fully by the reports of their second lamp committee, on the experiments made at the testing apparatus at Eppleton pit, Hetton Colliery, approved by them, and to which all improvements in lamps were to be subjected—see Transactions, part I., vol. xvi., pp. 2-19—where the general results are stated as follows:—“An inflammable mixture of pit gas and air moving at the rate of 8 ft. per second, against a stationary Davy lamp without a shield, will explode in a few seconds. The addition of an ordinary shield to a Davy lamp is of little benefit—with a shield from top to bottom of the gauze the lamps explode at 12 ft. per second. A Clanny lamp, under similar circumstances, will explode in a mixture passing at 9 ft. per second. A Stephenson lamp will explode at 9 ft. per second. A Messelser lamp passed the flame as easily as a Davy lamp—at 8 ft. per second.” Since this report a Clanny is found to explode at the same rate as a Davy—8 ft. per second. A current of air 8 or 9 ft. per second is of common occurrence in mines, being only  $\frac{1}{4}$  miles per hour; moreover, a lamp moving against a current would have the same effect as an augmentation of that current, therefore a man walking against a current at the rate of three miles per hour leaves only  $\frac{1}{2}$  miles velocity of current to make the danger perfect.

The managers of mines must trust in the carefulness and presence of mind of the miners to protect the present lamps under dangerous circumstances, but how much more reasonable it would be to place in their hands a lamp which does not require this skill and promptitude on the part of the miners—qualities which can never be expected on all occasions. And it is now a fact that there are lamps (in use at some collieries, and, therefore, the objection of impracticability cannot be urged against them; nor that of expense, for they are as cheap as those now in general use) which have been experimentally exposed to, and will safely bear, velocities of even 50 to 60 ft. per second; and as the generating pressures are as the squares of the velocities produced, the safety of the lamp whose exploding point is 8 feet per second, is to the safety of the lamp whose exploding point is undetermined, but which must exceed 50 ft. per second, in the minimum ratio of 64 to 2560, or the latter is 40 times safer at the least.

After the evidence above adduced few will maintain the adequate safety of the present lamps. But while the Bill contains regulations concerning single-link chains, overhead coverings, horned drums, breaks, and many other things not objectionable but necessary, this fruitful cause of danger is passed over. While thus it is provided that an unsafe lamp shall be locked, it is not required that a safe lamp shall be used, either locked or not; and while an agent is made responsible for the omission of the use of an unsafe lamp, he is not responsible for using an unsafe in preference to a safe one; and while a workman is made responsible for the use of a lamp which he knows is by mechanical deficiency unsafe, an agent is not responsible for using a lamp which he knows is by its inherent principle unsafe.

## COAL AND WAR.

Coal seems destined to play a prominent part in future years in Germany, as well as war. This is shown by the great and continuous increase in the production year by year during the memorable sixth decade of the present century. Commencing with 1860, and ending with 1869, both inclusive, the yearly production of coal in Germany was as follows:—

1860 .....	Tons 12,347,828	1865 .....	Tons 21,794,705
1861 .....	14,133,048	1866 .....	21,629,746
1862 .....	15,576,278	1867 .....	23,738,327
1863 .....	16,906,707	1868 .....	25,704,758
1864 .....	19,408,989	1869 .....	26,774,368

In other words, Germany would seem to have raised in 1869 double as much coal as France, and about one-fourth as much coal as Great Britain. The Germans are still very far behind us in the matter of coal mining, but they would appear to have now broken ground in earnest. If we compare the production of 1869 with that of 1860, we see an increase of 14,426,540 tons, or 117 per cent. Coal seems to have been rather cheaper in Germany in 1869 than in 1860, since while the increase in the production was 117 per cent, the increase in the value was only 97 per cent. In the production of 1869 Prussia was represented by 23,761,094 tons, or 88-70 per cent.; Saxony, by 2,584,292 tons, or 9-60 per cent.; Bavaria, by 340,571 tons, or 1-30 per cent.; and the other States of the Zollverein, by 88,411 tons, or 0-40 per cent. In coal, as in war, Prussia thus stands foremost among the nations forming the Zollverein; and in coal legislation, as in war making, Prussia can probably do pretty much as she likes. Well, when the Zollverein had raised in 1869 its 26,774,368 tons of coal the question, of course, arises—“What did it do with it all?” It would appear that the quantity of coal exported in 1869 from the Zollverein was 3,984,828 tons, or 14-90 per cent. of the whole extraction. In the total of 3,984,828 tons, France figured for 1,720,514 tons, or 43-20 per cent.; and the Low Countries were represented by 1,259,159 tons, or 31-60 per cent. The quantity of coal imported into the Zollverein in 1869 was 1,856,149 tons, of which 401,492 tons, or 21-60 per cent, came from Belgium, while 25,880 tons, or 1-40 per cent, were obtained from France. Adding to the indigenous coal production of the Zollverein in 1869 the amount of the coal imported, and deducting from the total the quantity exported, we find that the consumption of coal in the Zollverein in 1869 was 24,645,689 tons. Of this consumption the Zollverein itself supplied 92-5 per cent, while foreign imports made good the remaining 7-5 per cent. On making a corresponding calculation for 1860, we find that in that year the coal consumption of the Zollverein was 11,292,437 tons; the consumption of 1869 accordingly presented an increase of 13,352,252 tons, or about 118 per cent. In 1860 the coal consumption of the Zollverein was 61 cwt. per head of the population; in 1869 it had grown to 12-5 cwt. per head of the population. An increase of 61 cwt. per head would thus seem to have been established in the ten years; in other words, the coal consumption of the Zollverein increased during the decade to the extent of 91-5 per cent, while the population only increased in the same period to the extent of 14-5 per cent.

These data suggest many reflections. They show that manufacturing industry in various forms has acquired an immense development among the Germans of late years; it is only upon this hypothesis that we can explain the great increase in the consumption of coal among the German people. This being so, it is difficult to see that it is not the interest of the Zollverein to remain at peace with its neighbours, instead of cherishing the ambitious dreams of military aggrandisement with which German politicians are sometimes credited.

Germany is now strong enough and large enough to hold her own with all the world, and there can be no possible justification for her engaging in some fresh conflict which would set half the globe in a blaze. Further, in proportion as the Germans turn their resources to better account, and accumulate the wealth resulting from the pursuits of modern industry, they will acquire a distaste for war. War is the normal occupation, perhaps, of the savage, but civilised man rarely takes to it without a strong effort of the will, and unless he is coerced by circumstances from which he cannot escape. The secret of the marvellous military successes achieved by the Germans during the last twelve eventful months is probably to be found in systematic organisation, unwaried perseverance, and universal military service. But although universal military service may be tolerated for defensive military purposes, it would soon prove intolerable if devoted to the prosecution of some war undertaken for war's sake or for the development of some ambitious project or rapacious aggression. Not all the resolution of a BISMARCK, or all the

strategy of a Von MOLTKE, or all the tactics of a Von ROON could long induce the Zollverein to accept a policy of ambition and aggrandisement. After all, coal is the antidote of war, since coal means industry, wealth, comfort, and happiness.

## THE LUSTRUM IRONWORKS, AND THE CO-OPERATIVE SYSTEM.

The success which has attended the application, by Messrs. BRIGGS and SON, of the co-operative system to the working of the Methley Colliery, has naturally created the desire at many other places to adopt the principle as the most ready means of settling and preventing future differences between employers and their workmen; the Lustrum Ironworks, which are situated at the north end of Stockton-on-Tees, being amongst the most recent to seek the advantages which co-operation affords. To carry out the object in view, the STOCKTON CO-OPERATIVE IRONWORKS COMPANY has been formed, with a capital of 25,000£, in shares of 5£. each, and it is proposed to purchase, develop, and extend the works and business, which are already in good condition, and favourably known in Brazil, Turkey, Russia, Australia, &c., as well as in this country, from the extensive contracts that have been undertaken. It is understood that the task of organisation has been undertaken by Mr. Charles B. KING, C.E., of London, and the promoters are satisfied that, from the very rapid development of the iron trade in the district, the Lustrum Works may fairly be classed as one of the most convenient and best arranged works in the country, and one which, after all expenses have been provided for, will give a highly remunerative profit to the shareholders.

The works comprise about 4 acres of freehold land, with buildings upon it of a very substantial character, and replete with powerful machine-tools of the most modern construction, furnaces, and all necessary plant. In the foundry, for example, there are three 10-ton, three 5-ton, and one 3-ton steam cranes, three ramming cranes, a steam loam mill, a horizontal steam-engine, with large boiler and fittings, a cupola stage and hoist, ladies and ladle bogie, tools, pipe patterns, joiners' benches, core drying stoves, a new double cylinder engine for hoists, pipe testing machine, and various other articles; whilst the fitting shops, pattern makers' loft, bridge yard, &c., are equally well provided. The plant for dipping pipes comprises a powerful steam crane, with 40-feet dipping pits, and the stores are well filled up, comprising amongst other things several sets of Whitworth's stocks and dies, drying stove, 1-ton weighing machine; a very large stock of rivets, chains, tackle, winches, blocks, and falls, leather belting, cast steel in sizes, and all other necessaries for carrying on an extensive business. As to the situation of the works for facilities of transport it is all that could be desired—several sidings, on the works communicate with the North-Eastern Railway, which runs along the whole of one side of the premises, and the River Tees is in close proximity. The works and plant have been valued at 20,000£, and no additional outlay whatever seems necessary to enable the company at once to execute such orders as have been executed by the late firm to the entire satisfaction of all who have had dealings with them; but it is proposed, when the present works are put into full operation, to further extend and develop them by erecting forges for every description of ironwork requisite for iron shipbuilding and other purposes, for which there is an unfailing demand; also, rolling-mills for the manufacture of iron. By these means the ordinary constructive ironwork may be more cheaply, efficiently, and rapidly completed. The prospectus of the enterprise will be shortly issued to the public, and as there is to be no promotion money, nor unnecessary expenditure, it will no doubt be appreciated by the public as it deserves.

## HOWATSON'S PATENT PUDDLING AND HEATING FURNACES.

In our trade report from North and South Staffordshire we, a few weeks since, briefly noticed that the above inventions were being tested at the Earl of Dudley's Round Oak Ironworks. We are now in position to give particulars of the almost startling results obtained from the experiments, and a full description of the patent furnaces. Mr. Andrew Howatson, the inventor, has lately been manager of a large ironworks in Scotland, and throughout his life has devoted much attention to the economical manufacture of iron. Having privately tested his invention, as applied to puddling and heating furnaces, he gave up his position, and came into this district in order to get the plan tried at some place of high standing. His present abode is Brindley Ford, near Congleton, Staffordshire. The invention having been submitted to Mr. E. F. Smith, the Earl of Dudley's chief agent, who is ever ready to consider anything that has for its object the advancement of science, or the improvement of the trades with which he is connected—that gentleman seeing the advantage of it, gave permission that it should be tried under the supervision of the manager of the Round Oak Works, Mr. R. S. Casson. The importance of the invention, to not only ironmasters, but the community at large, will be understood when we state that taking the estimated number of furnaces in Great Britain, and supposing they were all constructed upon the new principle, a saving in fuel and iron to nearly the value of 4,000,000£. would be made.

The invention consists in supplying hot instead of cold air for the combustion of fuel under the grates of puddling or heating furnaces and it is maintained that by so doing a great saving of coal and iron is secured, and the furnaces work better and quicker. The air in each case is heated by the furnace itself. The invention is applied to a heating furnace in the following manner:—The opening under the fire-grate at the end of the furnace, at which the air enters in the ordinary way, is closed by a wrought-iron door. A small space is left above the door for cleaning the bars, and this is covered by a vertical sliding door, which can be raised by a balance-weight, and a small hanging door is put over the hole through which the coal is charged, consequently no air is admitted to the fire at this end of the furnace. At the bottom of the stack there is a square opening, surmounted by several perforations in the brickwork, and through these the cold air enters into a flue or heating chamber that surrounds the base of the stack. The air after passing round the stack, and becoming heated by contact with the sides of the flue, descends at the sides of the neck of the furnace, and traverses a series of horizontal flues, which are placed parallel to each other under the bed of the furnace, and through which the air is conducted to the ash-hole under the fire-grate, which it enters at a high degree of temperature, and passing through the fire-bars is used for the combustion of the fuel. In order

proves the saving of the iron. The furnace has worked better, and the iron has been sooner and more uniformly heated. From observation it is expected that the brickwork of the furnace will last longer. The labour is less, as much less firing is required. The cost for altering a furnace is about 5%, but it is a question if this is not made up by the lesser quantity of bricks required. Having heard of this successful trial, most of the other leading ironmasters in the district are taking the matter up.

## REPORT FROM SCOTLAND.

June 28.—The warrant market was quiet at the date of our last weekly report, and the same tone continued throughout the remainder of the week, the price touching 56s. 6d. cash. On Monday it became apparent that the shipping returns to be given out on Tuesday would be exceedingly favourable, and there was, in consequence, more disposition to buy, 56s. 11d. cash being paid on that day, and 57s. 3d. on Tuesday. To-day the market opened pretty firmly, a moderate business being done up to 57s. 4d. cash and 57s. 7d. one month, the closing prices being slightly easier—sellers 57s. 3d. cash, and buyers 57s. 6d. one month. The rumour that all raw materials were to be subjected to an additional *ad valorem* duty of 20 per cent. by the Versailles Government attracted some attention, and was considered as far from favourable to the prospects of business with France. It is currently reported that the Carron Company, whose works are so well and favourably known over the whole world, are making arrangements to increase very considerably their make of pig-iron. The prices of shipping iron are subjoined. There is not much change to report, but an advance has taken place in the Langloan and Coltness brands, on account of the good continental demand :—

	No. 1.	No. 2.
G. M. brands at Glasgow (deliverable alongside).	57s. 6d....	57s. 0d.
Gartshill ditto	ditto	57 6
Colness ditto	ditto	57 6
Summerlee ditto	ditto	57 6
Langloan ditto	ditto	57 6
Carnbroe ditto	ditto, ex store.	57 0
at Port Dundas	ditto	57 6
Calder ditto	ditto	57 0
Glenarnock at Ardrossan	ditto	57 6
Dalmenyton ditto	ditto	56 0
Eglington ditto	ditto	56 0
Carron at Grangemouth	ditto	55 0
Shotts ditto	ditto	58 6
Kinnell at Boness	ditto	54 0
G. M. brands at Middlesbrough	ditto	47 6
Bar iron.....	27 15	to £3 0 0
Nail rods.....	8 0 0	
SHIPMENTS.		
For the week ending June 24, 1871.....	Tons	19,876
" June 25, 1870.....		10,925
Increase.....		9,551
Total increase since Dec. 25, 1870.....		53,092

The Malleable Iron Trade throughout Scotland is very buoyant, and there is a great demand for workmen for Dundee and Aberdeen in Scotland, and for the iron districts in the North of England. There is also a scarcity of labour in the districts in our immediate vicinity. The rolling and plate-mills are as busy as they can be, and the forge and engineering establishments are generally behind with their work. Prices of all kinds of finished iron hardening. The wages question is, unfortunately, sundering the ties which connect master and man; and Unionism seems to have so inoculated our working classes with its baneful views that to carry on manufacturers of any kind is to engage in a game of hazard. It was expected that the dispute between the Glasgow Iron Company and their puddlers at Motherwell would have been satisfactorily arranged this week, by the acceptance of the company's offer of the advance demanded by the puddlers; but, although a considerable number of the men on strike signified their willingness to begin work, the Union interposed its veto, and would not allow them, unless the treasurer of the association was permitted to begin work too. If this is not coercion, what is?

Mr. Ferrie has taken another patent for improvements in smelting, and Mr. Hunter for utilising the waste gases of furnaces. Several of our Scotch scientific iron smelters seem to have set their minds on accomplishing improvements in iron smelting, and it is sincerely to be hoped that their labours may meet with an adequate and satisfactory reward.

Although some of our friends in the Sale Coal Trade have been complaining during the month, there has been an increase in the shipments of very nearly 30,000 tons, and on the six months of 162,505 tons, the figures for the six months being, this year, 904,361 tons, against 741,856 tons in the first six months of 1870. During the week just ended we had full average shipments, the returns showing 43,039 tons, against 42,194 tons in the corresponding week last year. Prices unchanged, but in favour of buyers. There are still signs of a coming wages storm, but whether the men will take the advice of Union demagogues, or listen to their own better reason, may depend very much on the result of a pervading accidental feeling, which we have often seen to sway an assembly of miners. Unionism, which has now assumed, in many instances, a process of mitigated riddling, should be circumscribed by wholesome laws, so as to render its operation innocuous on those who do not wish to be controlled by it. The ironstone miners in the Mayhill district have, by a majority only, caused the men at one of the pits to strike for an advance of 6d. per day, but the Jordanhill men, the work ballotted to come out, thought the ballot an unfair one, and they have had the courage to remain in. It is pleasing to note that the miners are getting completely disgusted with the strike nuisance and its accompanying burdens and privations, and are longing heartily for freedom from its enthalling trammels. All honour to Jordanhill for setting the example.

At the Anderson's University annual meeting—Mr. Young, of Kelly, in the chair—it was stated that the sum of 10,000 guineas for the establishment of a Chair of Technical Chemistry had been paid over to the trustees, the princely sum of Mr. Young; and Prof. Bischoff, of the University of Bonn, had been appointed to the Chair. A movement has been set on foot during the year by the Lord Provost of Glasgow for the establishment of a technological college, and the Andersonian had been requested to take the subject up. A resolution was submitted, and unanimously agreed to by the trustees, to the effect that the proposal to form this college in Glasgow met with their hearty approval, and steps have since been taken for its establishment. The Chairman further stated that there was a proposal to establish a Chair of Applied Physics in the University as a counterpart to the Chair of Applied Chemistry, and no sooner had the proposal been made than a gentleman offered to subscribe 2000/- to further that object.

The Clyde shipbuilding yards are well filled with hands, and although most of the firms have engagements that will keep them employed till the end of the year and on into 1872, new contracts for a number of large vessels have been taken by several firms for various home and foreign steamship companies.

**THE COAL AND IRON TRADES.**—A correspondent of the *Glasgow Herald* writes:—"The exports of coal and pig-iron are on a prodigious scale, and quite beyond anything before experienced; in point of fact, should they continue at this rate, it may end in a positive scarcity. Coal, the basis of our manufacturing strength, ought at this season of the year to be accumulating in the hands of coalowners; the summer is their opportunity to form a reserve. But what is the fact? and I fear my information is but too correct. If the production were stopped for two or three weeks our entire industry would be paralysed from sheer want of supplies. The truth is, the demand has been allowed to creep upon us so stealthily that the ordinary incentives to a check have not yet been stimulated. The coalowners, finding labour patient and willing, have refrained from advancing prices, and the result is a drain on our resources. If coal were our only industry, or, as at Newcastle, it formed the chief staple, then this marked withdrawal would not be so dangerous. But what hangs on our supply of coal? Pig-iron, of which we produce over a million of tons annually, requires a supply far in excess of the ordinary export demand; and it is the last importance that our wants for this purpose should be certain of fulfilment. The energies of our coalowners and merchants are always keenly applied to extending and promoting the largest possible out-put and exports. It is all right enough, and healthy enough, if it brings with it a return to all concerned; but the characteristic feature at this moment is, that so sudden has been the demand that those who guide and govern costs have not awoken to the magnitude of the change.

Who are the men about? There is no need for squabbles and meetings, delegates here and delegates there; what they fall to see is that their share of the good times is being exported with every ton of coal and iron which is shipped to foreign shores. The masters have no interest to speak first; if spoken to, would they refuse an advance? Certainly not; it will not come out of their pockets, but out of the pockets of those who are the buyers of our coal and iron, at the shape of higher prices. The whole world is taking away more of our raw material than ever it did in any former year. Even Germany, a country almost as reliant on its coal supply, and largely so for its iron, is importing more; and what is the cause? Her mines are only partially manned, and all available labour is commanding high pay. France, too, denuded of some of her richest coal-producing districts, will want hundreds of cargoes to fill up her empty mines. Should all this demand be supplied at the peril of our running bare, and without a penny of advantage to those of our people who, however unreasonable at times, have now a clear claim to share in the advantages of prosperity? There

is no mistake about it. The supply of coal is too low, the wages for producing it are too low, and the sooner the owners and men awaken to these facts the better for the country.

Pig-iron is in very much the same condition—we are letting it flow out of the country without its having rewarded the collier, miner, and maker sufficiently. The demand for it is too great to be killed by higher producing prices. Foreigners seem to have selected our cheapest article. Our shipbuilding yards, our forges, and our engineering shops are all so full of work that manufactured iron is wanted beyond our power of production—indeed, we are importing largely from England at prices which would be very remunerative to our Scotch manufacturers, if they had the power to produce; but of this our raw material consumers abroad continue to avail themselves.

X.—Since writing the foregoing, I have been supplied with the figures recording the exports of coal and iron since April 1. They are remarkable:—Coal (12 weeks), 499,177 tons, against 384,730 last year; pig-iron (12 weeks), 221,285 tons, against 171,892 last year. In both cases the increase is about 30 per cent. What does this coincidence mean?

## REPORT FROM THE NORTH OF ENGLAND.

June 29.—In our report a fortnight ago we gave a description of the Carlton Ironworks, which had been re-modelled, and were commenced under the co-operative system on June 14. Upon this we commented in our leading columns in last week's Journal, and have now the pleasure to note that a company is in course of formation for the purpose of buying the Lustrum Ironworks, at Stockton-on-Tees, and working the same upon the co-operative principle. The capital is fixed at 25,000/., to be distributed in 5000 shares, of 5/- each, and a number of the shares are to be allotted to the workmen.

At the Middlesbrough Iron Market, on Tuesday, Mr. S. Danks, of America, exhibited a model of his patent revolving puddling-furnace, which he stated can be worked at a saving of 10 per cent. in the yield of iron, as compared with the ordinary method, and also a saving of 30 per cent. in coal. The invention was inspected closely by most of the leading ironmasters on 'Change, who appeared to be much interested in it, and Mr. Danks has promised to lay the matter before the Iron and Steel Institute at its next meeting.

There was a good attendance on 'Change on Tuesday. Prices remain firm, at last week's quotations, and orders of importance for pig-iron have been placed within the past few days at 48s., net cash, for No. 3. Deliveries are going on briskly, and the quantity consumed for manufacturing purposes in the district seems to be increasing. Enquiry is brisk, and continental demand is improving. For rails an improved enquiry is reported. Orders have recently been placed in the North for Russian account. The demand from this quarter is more encouraging, and there is every probability that a large quantity of railway material will yet be sent to that country before the close of the present season. American requirements are still numerous, and considerable orders are in hand for execution.

The plate works in the district are well employed, and the bar mills are also fairly off for orders. Local foundries are busy on pipe orders. Engineering houses on the Tees are busy, and are reported to have received a good deal of work within the past week or two that would otherwise have been executed on the Tyne but for the obstinate contention at present going on between the masters and the men there. It is anticipated in some quarters that after this week the strike will practically terminate.

We understand that Messrs. Bolckow, Vaughan, and Co. (Limited) have purchased the Hunwick and Newfield Collieries, situate near to Bishop's Auckland.

## TRADE OF THE TYNE AND WEAR.

June 29.—There has been a plentiful supply of ships during the past week, and a large amount of business of all kinds transacted both in imports and exports. Large imports of esparto grass and timber have been unshipped at Tyne Dock, and constant complaints are made of the want of sufficient accommodation for the business now brought to these and other docks. There is a rumour that a large addition is to be made to the Tyne Docks shortly, but if this was determined upon some considerable time will be required for their completion, and at present this large company have many heavy works in hand. Great exertions are making to get the direct line from Pelaw to Jarrow and South Shields completed, the great obstacle, which has swallowed up immense quantities of debris, being the bed of the river Don and the swamp adjacent. This extraordinary bog, which can only be compared to Chat Moss, on the Manchester and Liverpool line, is, however, nearly filled up, and the line is expected to be opened shortly. The direct line from Gateshead to Durham and Ferry Hill is also expected to be opened soon—that is, by the Team Valley route. The traffic on this system continues to increase to an enormous extent, and the half-yearly returns will show a very large increase in the receipts as compared with the former half-year. This increase has taken place in all kinds of traffic and for passengers, but it is held by many that the receipts for this branch of traffic would be largely increased if a reduced scale of charges were adopted for comparatively long journeys.

The system of co-operation appears to be the only likely method of putting an end to strikes of workmen, and the results that have been achieved at the works of Messrs. Briggs appear to afford great encouragement that the system will prove beneficial. We have no faith in arbitration; at any rate, the system does not appear to be capable of general application. No doubt it is quite applicable where a scale of payment has been decided upon, and the rate of payment has to vary with the price of the commodity which is produced. Should a dispute arise as to the price to be paid under those circumstances arbitration appears to be a very natural solution of the difficulty; but the case is quite different when a rise of wages, or a reduction in the hours of labour, which means the same thing, is asked for. Under those circumstances the introduction of a third party will hardly be tolerated by either side. The system of co-operation has been introduced here most extensively in the grocery and clothing trades, and has been eminently successful. Large and prosperous stores of this kind have been in operation sometime at Blaydon, Bedlington, Chester-le-street, and other places; and there appears to be no reason why the system should not succeed in the coal and iron trades. It is proposed to purchase the iron and engine works carried on successfully by the late Mr. Morison, at the Ouse Burn, Newcastle, and to work them on this principle.

An illuminated address is to be presented to Mr. C. M. Palmer, at Jarrow, on Saturday, July 8. The occasion of this address is the completion of the erection and fitting up by that gentleman of a very handsome and complete hospital for the use of the workmen at the immense iron and engine works at Jarrow. It is a very beautiful work of art. First a view of the hospital is given, and below are drawings representing the various processes in the iron foundry carried out at Jarrow, and in the centre there is a fine portrait of the founder and erector of the hospital. It is also rumoured that a grand banquet is to be given by Mr. C. M. Palmer to the Emperor and Empress of Brazil on the occasion of their expected visit to the Jarrow Works in August next.

The Iron Trade continues extremely brisk in all branches, and the demand for rails and finished iron is still increasing. This week is the greatest holiday in the North, the Newcastle races being held, and little business or work of any kind is done; most of the large iron and engine works are off for the week. After this week is over some attempt will be made to get the large works, now idle on account of the engineers' strike, started, and it is expected that many of the old hands will be quite willing to go in; they are most certainly quite sick of the strike.

**SILKSORTH NEW WINNING.**—A party of mechanical engineers from the Auckland district paid a visit to Earl Vane's new colliery winning, at Silksorth, where two new pits are being sunk. The party were received and shown over the works by Mr. Lindsay, the resident engineer, and Mr. Coulson, the master slaker. They afterwards proceeded to Sunderland, and dined at the Queen's Head Hotel. The chief features of the works are the range of new cylindrical boilers, constructed on the most improved plans, and the pair of double horizontal valve engines, by Barclay of Kilmarnock, which are of 300 horse-power nominal, and combine all the most recent scientific improvements. This machinery is said to be the most powerful and perfect of its kind in use for colliery purposes in this district. At present the engines are used for pumping, but will ultimately be used as the winding engines when coal has been reached and the colliery is in full work. The sinkers are now engaged in tubbing through the water underlying the limestone, and it is not expected that the required seam of coal will be reached before about 18 months hence. Silksorth may then be expected to become a large and populous colliery village.

There is no limit to the development of the iron trade of South Durham and North Yorkshire. Wherever you travel in that busy district you find a scene of active industry. Some idea of the enormous trade of the Cleveland district may be formed from the statement that no less than 270,000 tons of coal and coke were sent down the Stockton and Darlington section of the North Eastern Railway in May for local consumption only. At Shildon, the Stockton and Darlington Railway Company have now a greater number of sidings for shunting than any other railway company in the world possesses in one place, and they are extending. The company are also replacing their chariot wagons with trucks. These trucks carry from 8 to 9 tons of coal, or between 5 and 7 tons of coke each. The Bishop Auckland Steel Works, the property of Mr. Thos. Vaughan, are now in full activity. Fighting Cocks Ironworks, which after the great strike were only in a middling way, are now extremely vigorous, and in very full employment. The Carlton Ironworks have been commenced upon the principal of industrial co-operation. At Cargo Fleet the iron trade is extending considerably, and a new plant intended for large operations, will be

opened shortly at the Bousfield Ironworks, South Stockton. Middlesbrough is increasing every month in wealth and importance. A very cursory glance at the town and district is sufficient to convey an impression of the magnitude of the industrial operations carried on here. The merchants and manufacturers of this town are a vigorous, pushing, and determined body of capitalists, with a thorough reliance on themselves and the natural wealth of the district. No one can predict what Middlesbrough and the Cleveland district may become in twenty years. There is nothing to hinder it from going on at the same rate of progress that has characterised its marvellous history during the past twenty years. Its mineral resources seem inexhaustible. It is a matter of great regret that a better understanding does not prevail between Stockton and Middlesbrough with regard to the management of the Tees. Middlesbrough is undoubtedly entitled to more weight and authority on the Conservancy Board than it now has. The defeat of the scheme of the North-Eastern Railway Company for a bridge across the Tees, to connect Middlesbrough by a direct route with the Wear and the Tyne and the Hetton and West Durham coal and coke districts, is a great disappointment to the ironmasters of Cleveland, for whom better access to these districts is an absolute necessity. The coal traffic from the cunty of Durham must have more railway facilities than it has at present. Some other scheme, therefore, will have to be fought out between Middlesbrough and Stockton in the next session of Parliament.—"Elfin." *Newcastle Daily Chronicle*.

## REPORT FROM NORTH AND SOUTH STAFFORDSHIRE.

June 29.—The demand for coal in North Staffordshire is steady for the season, and, except in the flooded districts, the collieries are in satisfactory operation. The orders for ironstone are well sustained, and quotations continue firm. In the iron trade some interruption to business continues to arise from the wages dispute, and some speedy settlement of the latter is, in the interests of all concerned, much to be desired.

In South Staffordshire the coalmasters are very fairly supplied with orders both for household and forge fuel, the former being in unusual request for the season. There is no change in quotations. The sinking of the first shaft by the newly-formed East Cannock Colliery Company (Limited) is making steady progress, but the projected enterprise for the development of the Huntington estate, in the same neighbourhood, is still suspended, owing to a want of agreement with Lord Atherton as to the terms of the minimum royalty to be paid. The thick coal pits in the neighbourhood of Dudley and West Bromwich are in very satisfactory operation. Native ironstones command a brisk sale at a further slight improvement in quotations. In the iron trade of the district a decided tendency to firmness is noticeable, particularly in the pig department, in which all the makers not only experience a better demand, but also an advance of 2s. 6d. to 5s. per ton in quotations as compared with the rates prevailing three months ago. The estimated weekly produce of pig iron in the district is 14,000 tons, but this yield will shortly be increased considerably by the "blowing in" of several additional furnaces, one of the well-known Stour Valley range being of the number. The Finished Iron branch, although not in so satisfactory a condition as the department just noticed, is steadily improving, and the prospects of the new quarter are regarded as encouraging, although it is feared that for some time longer a considerable margin will exist between the actual selling quotations for second-class iron and the official list. The latter, which has been confirmed for the next quarter at the Preliminary Meeting of the trade, held in Birmingham to-day (Thursday) is as follows:—Marked bars, 8/-; best ditto, 9/-; sheets, 9/-; rods, 10/-; gas strip, 8/-; 10s.; and others in proportion. In pigs, hot-blast range from 75s. to 77s. 6d. per ton; cold-blast, 90s. to 95s.; grey forge, 62s. 6d.; mottled, 60s.; common melters, 55s. to 60s. per ton.

It is remarked that the high price of hematite pig-iron, chiefly produced in the Cleveland district, is seriously affecting many of the South Staffordshire producers of finished iron. Lately the use of hematite pigs in the latter district has been very considerable, and when prices were lower these pigs were largely used in South Staffordshire by the makers of best iron, in substitution of local produce. The high price of hematite metal is due to the enormous demand for Bessemer steel, which is, if possible, still increasing, and, as a consequence, the Black Country pig-iron makers experience hardly any competition from Cleveland, and they are able to put up their prices accordingly. This is done, however, mostly at the expense of the finished iron makers, who, as a class, are unable to obtain a proportionate advance on their produce. The August meeting of the Iron and Steel Institute is to be held in Birmingham, and arrangements are already in progress. Earl Dudley will receive and entertain the members during their visit at his famous Round Oak Works, and it is not improbable that his lordship will preside at the banquet to be given to the Institute in Birmingham on one of the following days.

## REPORT FROM MONMOUTH AND SOUTH WALES.

June 29.—Greater satisfaction continues to be evinced in reference to the state of the Iron Trade. At but few, if any, of the ironworks in this district are there now any complaints of want of employment, the majority of the makers being so well placed for orders that they are enabled to keep their hands working full time, and they need be under little or no anxiety for the next two or three months at least. Some have already closed engagements that will occupy the greater part of the ensuing quarter to work off. There is, therefore, a buoyant feeling evinced amongst both the masters and workers, and the future is hopefully looked forward to. The return of prosperity is particularly gratifying after so much depression, and it is to be hoped that progress will continue to be made for a long time to come—indeed, many of the masters continue to give proof of their anticipation of prosperity in the future by making additions, extensions, and improvements, and otherwise increasing the capacities of their establishments. In reference to the principal sources of demand there is not much fresh to report. The shipments of rails, bridge iron, and other materials are still much larger to the United States and South America than in any other direction, and this is likely to be the case for some time to come. Russian purchasers remain in the background, and engagements with Muscovite merchants are now the exception, and not the rule, in this district. It may possibly continue so until the end of the year. On account of France there is but little doing yet in our market, but prospects may be said to be brightening in regard to that country. A fair business continues to be done in iron for home use. Bars are in somewhat better request. Pigs also are reported as commanding an increasing sale, and prices are the turn in favour of makers.

A rather isolated branch of industry in South Wales—the manufacture of chains, cables, and anchors—seems latterly to have experienced some depression, in consequence of which it is found necessary to make a reduction in the workers' wages. The Messrs. Lenox and Co.'s chain, cable, and anchor works, in the Taff Valley, is about the only establishment of the kind in the district, but it ranks as one of the largest in the kingdom. A brisk business has usually been done by the company, who employ a large number of skilled men, and a high rate of wages has hitherto been paid at the works. The company have, however, just issued a notice of a reduction of 5 per cent. in their wages, and as a degree of prosperity has usually prevailed amongst them the announcement was by no means a pleasing one to the men. The tin-plate works are in active employ, makers being well placed for orders, and prices are firmly maintained, the tendency being rather to advance than otherwise.

In reference to the Steam Coal Trade there is scarcely anything encouraging to notice. Orders on foreign account are still on offer, and, as might be expected, the proprietors who have their pits at work are reaping a golden harvest. This, however, is only temporary, and is not calculated to improve the position of the trade generally. Of the strike of the coalworkers in the Aberdare and Rh

men is being formed for the purpose of working the same, and there is little doubt but that the undertaking will be a valuable and remunerative one. The "Cribbwe Fawr," and other valuable veins, run in the locality. The Llynvi and Ogmore Railway will be easily accessible for the conveyance of the products to the ports for shipment, and the distance will not be considerable.

The House Coal collieries are in average employ, the unusual state of the weather for the time of year having induced buyers to keep up transactions.

Another explosion of gas has occurred during the week, the scene of which was the Compark Colliery, in the Rhondda Valley. The damage, however, was not extensive compared with the catastrophes which had occurred in that district, and no life was sacrificed. Several men were, however, badly burnt and otherwise injured, there being only nine in the pit at the time. The vicinity of the pit is, to all appearance, abounding in gas, as it is frequently found bursting up through the surface of the earth, and is encountered in large quantities in well slaking. The pit belongs to the Messrs. Davis and Co., and had been idle for the previous three weeks, owing to the strike. The firemen were engaged in turning in fresh air to disperse an accumulation of gas when the explosion occurred.

The Ebbw Vale Company's report for the year ending March is not quite so favourable as it was for the preceding year. The gross profits show a large increase, but against this is to be taken into consideration the fact that included in the profits is the sum of 90,446/- expended in outlay of additional plant. The directors propose to borrow 100,000/- upon debenture to meet this charge, and they expect that the profits will be sufficient to extinguish the amount in ten years. The important announcement is made in the report, confirming what has already appeared in my report, that Mr. Darby, the managing director, has succeeded in producing a specimen of a very superior quality of coal.

The arrivals at Swansea include—the Demetrios, from Bilboa, with 582 tons of iron ore, for W. H. Tucker, jun.; Alert, from Oporto, with 43 tons of copper ore, 25 tons of nickel ore, and 25 tons of lead, for Richardsons and Co.; Pansea, from Bordeaux, with 100 tons of pitwood, for J. Brogden and Sons; Oscella, from Bilboa, with 340 tons of iron ore, for T. Wood and Co.; Bound shot, from Catania, with 4200 cwt. of rough brimstone, in bulk, for Elford, Williams, and Co.; H. H., from Huelva, with 484 tons of pyrites, to order; Azores packet, from Bilboa, with 162 tons of iron ore, 17 tons of zinc ore, and 13 tons of lead ore, for H. Bath and Son; Faithful, from Bordeaux, with 190 tons of pitwood, for M. Smith and Co.; Newport, from Antwerp, with 130 tons of fire-clay, for H. Bath and Son.

**SOUTH WALES AND WEST OF ENGLAND COAL AND METAL MARKETS.**—There was a good attendance of members at the meeting, held at Swansea on Saturday, amongst whom were—Messrs. James Banfield, J. Maybury (Llanelli), Herbert Rake (Steel, Rake, and Co.), F. J. Merry, David Evans (Llanelli), C. D. Phillips (Newport), H. Evans (Newport), H. A. Swan (Cardiff), W. Stephens (Cardiff), W. Powell (Millbrook Works), R. B. Gullan, R. G. Thompson, Thos. Elford, W. Habakkuk, A. Bell, W. Thomas (Llan), and R. S. Roper, hon. secretary. There was a very good feeling in the market. Good mine irons are very firm, and advancing. Copper is firm, with an upward tendency. Spelter is quoted at 87.15s., and rather sellers. Tin is also stiffening in price. Lead is still easier. Tin-plates are in good demand.

Mr. Swann, of Cardiff, was inquiring for a large lot of British larch timber.

Mr. Roper handed in a copy of an analysis of a mixture of various samples of King's Sutton (Oxfordshire) iron ore, which is as follows:—

**The Manchester Laboratory and Government Science Class Rooms, April 27.—I hereby certify that I have examined various samples from the King's Sutton ironstone, received from Messrs. J. Berger Spence and Co., and the following is an average analysis of the samples:—**

Sequeloxide of iron.....	47.80
Carbonate of lime.....	37.00
Silicon.....	8.8 0
Phosphoric acid.....	0.350
Sulphur.....	0.120
Moliture.....	6.000
Metallic iron, 33.5.	100.070

J. CARTER BELL, F.C.S., Associate of the Royal School of Mines. We understand that considerable difficulty is being experienced in getting ore from Bilboa, even steamers being kept some days under demurrage; this is due to the want of shipping facilities at the port, and from the absence of proper means of conveyance from the mines to the port. We are informed that Mr. Feil, the inventor and patentee of the narrow-gauge railway, has his attention drawn to this serious want, and it is hoped that, with his usual energy, he will set to work and put the mines *en rapport* with the ships.

#### REPORT FROM DERBYSHIRE AND YORKSHIRE.

**June 29.—There has been but little change in business at the iron-works and collieries in North and South Derbyshire; the most notable fact being that the Midland Railway directors have declined going on with the ruinous contest, which has now lasted six months, between that company and the Great Northern, with regard to the London mineral traffic. A new rate-list has been issued, and the charges under it will commence on July 1. The new list includes not only the price to London, but also to places on the other side of the metropolis. The South Yorkshire coalowners' list is from Swinton, and the advance in the rate is not considerable, all things duly weighed. Still the change will have its advantages, seeing that coalowners will know their actual position, and be able to enter into contracts which they have not hitherto been able to do, as the rate made to meet a certain contingency could not be of a lasting character. The loss has certainly been considerable, and as the two companies will now act independent of each other, there can be little doubt it will ultimately be for the benefit of both the railway company and the colliery proprietors. One thing, however, appears certain, that the advantage which Derbyshire enjoys by being between 30 and 40 miles nearer London than the South Yorkshire coal field is one that must ever remain, so that the Midland will always be able to compete with the mining districts farther north. So far the coalowners on that line have fully maintained their position, for at no previous period have they sent so much coal to London as during the last three or four months, whilst the Midland Company has distanced all the other railways engaged in the mineral traffic, and having drops in the metropolis. That the line will continue to do so is evident, as there are several very large collieries being opened out, not only in the Unstone Valley, but also in the neighbourhood of Alfreton, so that the increased production of Derbyshire will be larger than in almost any other district in the kingdom.**

The ironmasters in Northamptonshire are also engaged in mining operations in the field just alluded to, and will not only be able to raise coal for the use of their smelting-furnaces, but will have to send a large quantity into the southern markets, whilst their own surplus ore will always find its way into Derbyshire and Yorkshire. Between Chesterfield and Sheffield is a most important coal field, which is now only being opened out, but which, before long, will throw something like 500,000 tons a year at least on what may be now termed the main Midland line. In all probability we shall soon hear that the Great Northern Company have gone back to something approaching the old rate, so that the trade can settle down, and colliery proprietors be enabled to enter into contracts, which they have not been able to do, so far as London is concerned, during the last six months, one large proprietor alone in South Yorkshire having had to decline an order for more than 100,000 tons of steam coal, as he could not tell how long the existing rate would last.

**EXTRAORDINARY YIELD OF SILVER.—The Eureka Daily Sentinel (Nevada), of the 6th inst., thus calls attention to a fact showing the progress of silver mining in Nevada:—“Twenty-four Hours! In the Eureka Consolidated Mining Company's works, in two large and two small furnaces, were smelted 10,145 tons of ore, yielding one-sixth bullion. The bullion made is worth \$350 per ton. We believe that to be a larger amount of bullion, and a greater number of dollars in value, than has been made in the same number of furnaces in America in 24 hours.” Taking into consideration the small number of furnaces employed, this yield is wonderful and unprecedented. The amount of gold and silver bullion shipped from Wells, Fargo, and Co.'s office, in Virginia, during the month of May was 664 bars, weighing 49,838 lbs., and worth \$1,148,787.50.**

**DOMINION OF CANADA OILS REFINERY COMPANY.—The Thames steamer, with the remainder of the engines, distilling apparatus, hydraulic presses, pumps, tanks, and other machinery of this company, left the Victoria Docks on Thursday, for Quebec and Montreal. The company have also sent by this steamer a working engineer from Messrs. Hayward, Tyler and Co.'s establishment, who has been engaged in the construction of the machinery, and who will superintend its erection on the company's land at Sarnia. As before stated, the machinery has been divided into two complete sets, and the hole has now been forwarded by the respective steamers Medway and Thames (Temperley's line), so that in the event of any accident occurring to one of the vessels the company's operations should not be retarded for a single day. This will be seen to be an object of first importance, as time is so essential, and the company might have lost, but for this precaution, all the year; it being well known that the buildings could not be erected in Canada after the beginning of winter. The entire machinery has also been covered by insurance, but the value which would be receivable in case of accident bears but a very small proportion to the profits which are anticipated in the course of twelve months' working. Advice from Canada, received on June 28, state that the company is in possession of the land at Sarnia, which has been paid for; that preparations for the pile wharf and buildings were in active progress, and that it was universally conceded by the oilmen of Canada that the company is possessed of the best thing in the Dominion, and that the processes of the company for the treatment of the crude oil are a complete success. It may not be generally known that the mode of distilling the crude oil, under the patents of this company, is free from the slightest risk of explosion, the old system of fire distillation being completely ignored, steam alone being the medium of converting the oil into its different grades, and intimately atomising and destroying its mole-**

cular condition. As an instance of the danger of fire distillation, it may be mentioned, from advice received, that on the night of June 13 the Mammoth still of the Canada Carbon Oil Company took fire, and burnt down the works, occasioning a loss of \$10,000. Such an event can never occur by the use of this company's continuous patent safety still.

#### Original Correspondence.

[ADVERTISEMENT.]

##### THE QUEEN, THE KING, AND THE VIRTUOUS LADY.

SIR,—I find it the most speedy and effectual mode to answer the numerous questions that emanate from the pens of the hundreds of shareholders connected with these mines by now and then inserting the latest particulars in the columns of your valuable Journal in the shape of an advertisement letter; therefore, whether I please the many, and displease the few, or vice versa, I now recommend my jottings.

It will be as well to make a start with the *Virtuous Lady*—the whole need no physician; by this remark it is my intention to plainly insinuate that the Queen (and the King must of necessity follow in its footsteps) is such a success with its tin, copper, and silver, blended with the patent amalgamation process for the extraction of silver from low-class ores, that whoever may feel inclined to ridicule my predictions for the future, no one but a born idiot can attempt to disbelieve what is actually taking place in the present. I confess readily that my strong statements respecting the *Virtuous Lady* have not yet come to pass; and, like others, I have come to the conclusion that the mine is certainly an enigma. However, assuming an utter failure to be the final denouement of my prophecies, I should have only done what thousands of better men than I can ever hope to have been done before me—made a mistake. Mine has been from the first pure faith; it can be proved in a moment.

Do not protest to look after others first and myself last; never did, and very

possibly never shall; therefore it is with deep inward, if not outward, lamentations, that I regret not having sold my thousands of shares at 27, each, which I could easily have done last Christmas 12 months; but, no, I speculated; had faith, refused to sell, and the same old tale—made a mistake. The failure of the *Virtuous Lady* affects me more, infinitely more, than anyone else. But, stay; is it a failure? One need not be a necromancer to guess that these delays have alarmed me, and caused my great faith to be sometimes shaken. “Hope deferred maketh the heart sick.” I speak feelingly, and from experience. But last week a happy thought occurred to me that whilst sending Capt. H. Horswill a vote of thanks, ordered by the meeting of directors, for his energetic management of the copper department of the mine, I would probe his inward thoughts, and behind the scenes, actor to actor, privately learn, and for my own guidance only—that was my intention, mind you—his real opinion of the future of the mine. My letter was written in confidence, and the reply given in the same spirit; but having since received Capt. Horswill's written full and free consent for it to be published, for the benefit of the shareholders, I ask you to give it insertion—

*Virtuous Lady* Mine, June 22.—Sir: I beg to return my sincere thanks for the mark of confidence shown by your letter. If possible, it will lead to increased exertion in judiciously and energetically developing the mine. The points of operation in the south adit are not looking so well as when you saw them last week. There is a great deal more gossan and spar in the lode, and consequently not so much ore; and this falling off will go much against the sampling. You may depend, however, every ounce of ore that can be got will be. In driving the level on the north side of the shaft a better looking lode to produce ore I never saw; and if the indications fail here I shall be grievously put out and disappointed. In the adit level east the lode is at times a complete puzzle, some days producing gossan and beautiful stones of ore, then pyrite and ore, and again pyrite, carbonate of iron, and ore. Some days the lode is nearly as large as the end, and then again not more than 6 in. wide. It appears, as far as I can see, to closely resemble some parts of the old mine, and whilst this resemblance continues any day may bring a good deposit of ore.

We have beautiful ground in the trial shaft, highly stained with mineral. My thoughts are constantly occupied in this trial, and if we should be fortunate enough to find ore here (and I see nothing at all against it—in fact, quite the contrary) you may then consider the prize is won. And now for the canter, taken in on west of the cross-cut. Within the past few days a great change has taken place in the character of this lode. Instead of so much pyrite and slate, there is now pyrite from 1 ft. to 18 in. wide as a leader, with patches of pyrite in other parts of the lode. This pyrite also carries small strings of ore, and I am much pleased at its generally improved and improving character. I have for the past three or four days been carefully thinking over the general position of the mine, and although I cannot see any great amount of ore in sight to get samplings from, yet, from the general appearances the operations now present, I believe, to use an open term, we have not yet begun to sample.

I don't pretend to be enabled to see through the ground, and can only form opinions by analogy, and if this latter be any criterion it is only a question of a little more time and development to ensure you a great and lasting success. My faith has always been strong in the value of this property, and the more I see and study its leading features the stronger the impression grows that you will be repaid (for all your outlay and great anxiety) by a great and successful mine. Which is the sincere wish of H. Horswill.

There remains little for me to add. Some 18 months since it caused great merriment amongst those who never had faith in the *Virtuous Lady* a statement of mine that I firmly believed the mine would give a net profit of 20,000/- per annum; so far it has not been given, but it would take no very great success at the *Virtuous Lady* Mine to accomplish this, what I consider a very extraordinary feat. The past four months 15000/- worth of ore has been extracted at a profit of at least 1000/-, and there are sound, honest, healthy prospects of not only one but many points turning out successful in the course of time and further explorations. The last two samplings the ore exceeded in quality all the other mines throughout England. I do not quote this out of braggadocio (my triumph has not yet come), but as a simple fact, and if we can only blend quantity with quality the prize will, indeed, be great. All is being done that can be to win success, and the mine would be now paying profits but for the extensive explorations being carried on, as can be seen at once by the number of hands employed last month—93 men, boys, and girls.

In past years six men have broken in the old carbonas or flats as much as 100/- worth ore per month; and I argue this, that allowing the mine to be a speculation, it is possible within a year, or even a month, to meet with such deposits of ore, so that hundreds of tons can be sampled per month, and only 300 tons per month, worth 7/- per ton, represents 25,200/- per annum; and the 5200/- would be ample for costs, the remaining 20,000/- being profit, and whenever 300 tons per month are returned, and the time will come, it must and will mean immense profits.

No mine in England is more worthy of a spirited trial, and it will never stop again whilst I live, and am worth 100/- to spend upon it. The shares can now be had at 17s. 6d. each, fully paid up, or 7s. 6d. each, first, second, and third calls paid off. 2s. 6d. call per share, no premium whatever. Of the new issue of 5000 shares, representing 5000/-, only 1000/- has been spent, so that I think the shareholders and public must agree with me, backed by the statements of Capt. Horswill, that the future of the mine certainly looks bright; and, independent of the copper, the tin lodes are by development daily improving, and by-and-by this department, which for the past nine months has been swallowing up the greater portion of the little capital that has been expended, will considerably augment the profits of the company, and, consequently, tend to increase the dividends.

The Queen and King Mines need but little comment from me. Captain Knott and Mr. Doble showed the last meeting that six months hence, from the tin, copper, and silver known to exist in the mine—no speculation, understand, a positive certainty—blended with the amalgamation process, 10,000/- per annum profit at very least could be depended upon, and considerably increase as time allowed the numerous lodes to be worked upon. What is to be said in the face of all this? Simply that these mines are as safe an investment as the Bank of England, the only difference in the aggregate being that 1000/- invested in the latter twelve months will return a paltry 3/-, and the capital realisable about the same as at the present time; the former at least ten times (more likely thirty times) the interest, and as regards capital there is hardly a sensible limit to the price the shares may attain. I have sold 900 ozs. of silver already, extracted by the small amalgamation works, at the high price of 5s. 4d. per oz.; and when we are returning 10,000 ozs. per month, from very extensive works now in the course of erection, which we shall assuredly do in the future, and are making large sales of copper and tin, the demand for these shares will be enormous; and depend upon it that, like most great mining successes, they will go even far beyond their intrinsic value. I compare the public to a flock of sheep: it is difficult to induce any one of them to make a start, although they are assured that verdant grass lies before them; but in every flock, and so in every mining adventure, as soon as one takes the lead the rest are sure to follow, without heed or care whether the leader is escorting them into a pasture field or over a precipice. Many will, perhaps, argue that the future is so bright then why sell shares at their present low prices? But this is foolish reasoning. In every branch of business there is always to be found some who have money to spare, and others who are in dire need of it. The Queen shares are now 11. 10s.; King, 20s. A limited number only are for sale, and I know for a fact that four-fifths of the shareholders would not sell at 3/-, as they have faith in me and the mine, not forgetting Capt. Knott and Mr. Doble. They have gone in for an investment, have no more money to spare to invest further, but are willing and most happy to attend the grand result; which they feel convinced must take place anon.

I advise my friends warmly to go in for these shares at once, for as soon as the few who require the need are supplied with it I am confident not a share will be obtained under 3/- Within the past few months I have doubled my interest, and there is a limit to the means of every individual, but if the mine were entirely my own property, and allowing that I had no need of money for six months, I would not sell a share under 3/-, for that is their real intrinsic value at the present day, and no doubt at that price there would be many times the demand for them.

There are plenty of honest mining speculations now before the world, but I must and will maintain that these shares are now offered at a low speculative price, with the mineral actually discovered, and success, not to be reasonably expected and hoped for, but actually achieved. Add to this that the two mines have 5000/- cash each to work them, and I think even the most timorous, the thoroughly practical, and even the few enemies I have, will admit that my statements here are not too strong—aye, even that they are hardly strong enough. If there still remain any sceptics, I advise them to write to J. W. Doble, through your Journal, a few lines upon any point they may doubt, and I am convinced that he will give them a response the following week. For this purpose, which is for the aid of science, I ask the favour of you to insert such letters as correspondence and not advertisements. THOS. J. BARNARD. 175 to 178, Paternoster-buildings, Old Broad-street, E.C., June 30.

[For remainder of Original Correspondence see this day's Supplement.]

**EAST LLANGYNOD.—**It would seem that this mine is fettering fortune to attendance upon its progress. A special report of general prospects and the existing status of the undertaking has been made to a very large and prominent interest, comprising shareholders of ample capital and distinguished position, the purport of which, showing the marked and enduring improvements that have taken place at all points of the work now being carried on with such admirable energy and effectiveness, enhances the value of the shares, while leaving little doubt upon the great success that must ultimately ensue, the me-

dium of investment secured under the head of East Llangynod is endowed with a certainty of the most sterling and continued results.

At North Treskerby Mine meeting, held at the account-house on Monday, the adventurers made a call of 1s. 6d. per share. The loss for the past four months was 41s. 2s. 4d.

At the Sao Vicente Mining Company meeting, on Wednesday (Mr. Henry Haymen in the chair), it was stated by the Chairman that the report of the directors, which appeared in last week's Journal, contained all the information the directors had to communicate. As soon as it was found that the jacinto formation was not worth working it was given up, as they did also with the rock formation. They had been successful in purchasing the celebrated Brusutu property, and the services had been secured of Mr. Collingwood Kitto, a very able man, introduced to the board by one of the largest shareholders in the company, and who, they believe, would manage the property in such a way as to yield successful results. As soon as Mr. Kitto arrived at the mine, which would probably be in July, he would prepare a report upon the property, which would embody an opinion in addition to, and independently of, those contained in the reports already in the hand of the shareholders. He moved the adoption of the report and balance-sheet, which was seconded by Mr. R. D. Mangels and carried unanimously. The auditors having been re-elected, a vote of thanks to the Chairman and directors terminated the proceedings.

**COAL MARKET.**—The fresh arrivals this week number 90 ships. The market has not been so active for household coals, and we quote a decline in first-class sorts of 6d. per ton, all other kinds remaining the same. Hetton Wallsend, 18s.; Heswall Wallsend, 17s.; Lambton Wallsend, 17s. 3d.; Hetton Lyon's Wallsend, 15s.; Tunstall Wallsend, 15s.; Unsold, 4 cargoes; 15 ships at sea.

The Bank of England return for the week ending on Wednesday evening showed in the ISSUE DEPARTMENT an increase in the “notes issued” of 210,376/-, which is represented by a corresponding increase in the “coin and bullion” on the other side of the account. In the BANKING DEPARTMENT there was shown an increase in the “other deposits” of 3,882,424/-, and in the “seven day and other bills” of 5534/-; and in the “rest” of 5503/-: together, 3,882,471/-, and a decrease in the “public deposits” of 348,463/-, = 3,545,008. On the asset side there was an increase in the “Government securities” of 344,876/-, and in the “other securities” of 2089/- = 3,846,965/-, leaving a total decrease in the reserve of 301,957/-.

**AMERICAN GOLD AND SILVER MINES.**—Mr. E. Gledhill, Mining Engineer, Shrewsbury, sailed by the mail steamer Scandinavian on Thursday last for North America, it being his intention, after inspecting gold and silver mines in the territories of Colorado, Utah, Nevada, and California, to go forward into Arizona, Mexico, and South America. From thence, if time permits, he purposes visiting the New Zealand gold fields, which are destined long to receive a large amount of public favour and patronage. We trust Mr. Gledhill may have a prosperous and successful voyage, and no doubt he will bring interesting and valuable information back with him relative to the mining regions.

**WEST BASSET AND SOUTH FRANCES.**—We regret to hear of legal proceedings in this “Twelve years’ law suit.” A petition of appeal to the House of Lords was duly presented on Monday last, by the plaintiff in the suit of Thomas and others against Richards and others, from the decree of the Vice-Chancellor James of Jan. 29, 1869, dismissing the bill filed in Chancery on behalf of the West Bassett adventurers. This course, we are informed, was advised upon account of the Court of Queen's Bench having by their judgment of June 2, 1870, refused to enforce the award made upon the reference to assess the damages in the action of Lyte v. Richards, on the ground that the Court were not agreed upon the line of boundary intended to be drawn by the House of Lords pronounced in that action on June 22, 1866.—*West Briton.*

**London General Omnibus Company.**—The traffic receipts for the week ending June 18 were 11,029. 8s. 2d.

NORTH STAFFORDSHIRE.  
FREEHOLD MANSION AND ESTATES, AND FREEHOLD AND LEASEHOLD COLLIERIES FOR SALE.

In Chancery.

"WILLIAMSON v. WILLIAMSON."

TO BE SOLD, pursuant to an Order of the High Court of Chancery, made in a Cause of "Williamson v. Williamson," with the approbation of the Judge to whose Court the said Cause is attached, by Mr. JOSEPH COOKSEY, of the firm of Messrs. Joseph Cooksey and Son, the person appointed to sell the same, at the North Stafford Hotel, Stoke-upon-Trent, in the county of Stafford, on Wednesday, the 2nd day of August, 1871, at Three for Four o'clock P.M., in lots, the undermentioned valuable and extensive FREEHOLD ESTATES, AND FREEHOLD AND LEASEHOLD COLLIERIES—viz.:

The Greenway Bank and other Estates, late belonging to Hugh Henshall Williamson, Esq., deceased, situate in the parishes of Norton-in-the-Moors, Horton Leek, and Biddulph, in the county of Stafford, comprising a spacious MANSION, known as Greenway Bank, pletneously situate amongst undulating pleasure grounds and plantations, excellent pasture lands, and large ornamental sheets of water, with well-arranged domestic offices, stabling, loose box, and coach-house, extensive lawns, shrubberies, and shady walks, orchard, walled gardens, vineeries, conservatory, and greenhouses; a capital HOME FARM, with farm house, farm buildings, and yard, and seven servants' and labourers' cottages; several desirable holdings, consisting of homesteads and sound agricultural land, known as the Judge Fields, Woodhouse, Briers Clough, Ladymoor Gate, Lion's Paw, Crowborough, The Hill, Wickenstone, and The Falls Farms, interspersed with woods and plantations, in a good game district; and TWELVE HOUSES, with outbuildings and gardens, situate at Greenway Bank, Ridgway, Brown Edge, and Wickenstone, the whole being freehold, and containing altogether an area of 762A. 3R. 39P., or thereabouts.

Also, all those very valuable FREEHOLD and LEASEHOLD ESTATES, consisting of FARMS and COLLIERIES, situate at PINNOX and CHELL, in the parishes of Burslem and Wolstanton, in the said county of Stafford, known as the Little Chell, Chell Green, Pinnox, and the Wood Farms, and the Pinnox Chalkey, Chell, and Biddulph Collieries, comprising 470A. 1R. 0P. of freehold lands, with the MINES and MINERALS thereunder, and the farm houses and farm buildings, managers' houses and offices, workmen's dwellings, foundry, fitting shops, smiths' and carpenters' shops, winding and pumping engines, pit shafts, railways, and other colliery plant, erected and being in and upon the said lands. The MINES and MINERALS under 34A. 0R. 26P. of freehold land without the surface, and the various seams of COAL and IRONSTONE under 53A. 1R. 27P. of lands adjoining the freeholds, and held under a lease for 40 years from the 24th day of June, 1866, together with the engines, railway, and plant upon the lands comprised in the said lease. The mines include all the principal seams of coal and ironstone in the North Staffordshire coal field.

The mineral property is situate in close proximity to the towns of Burslem and Tunstall, and within a short distance of the Trent and Mersey Canal. A branch of the North Staffordshire Railway to Tunstall, as also the Potteries loop line, are now in course of construction through the property, and the company are under obligation to complete both these lines before the 15th of July, 1872. The Pinnox and Chell Collieries are traversed by a private locomotive railway leading to a wharf adjoining the main street of the town of Tunstall, which may be readily connected with one or both of the above-named branches of the North Staffordshire Railway.

There is another wharf in connection with these collieries at Brownhills, on the Trent and Mersey Canal, from which the mineral produce is conveyed to South Staffordshire and other districts.

The property also affords convenient sites for the erection of blast furnaces and other iron works, and contains an ample supply of excellent ironstone, as well as coal suitable for the manufacture of iron.

Cards to view Greenway Bank may be obtained from Mr. JOHN BUTTERFIELD, of Histon Mill, Tunstall; and printed particulars and conditions of sale, with plans, may be obtained gratis from Messrs. JOSEPH COOKSEY AND SONS, Auctioneers and Mincing Engineers, West Bromwich; Mr. JOHN BUTTERFIELD, Histon Mills, Tunstall; ELIAS DORNING, Esq., C.E., 41, John Dalton-street, Manchester; JOHN LANCASTER, Esq., Ince Hall, Wigan, and Bilton Grange, Rugby; MESSRS. SLATER, HEELIS, AND CO., Solicitors, Manchester; MESSRS. BUCKLEHURST, WRIGHT, AND MAIR, Solicitors, Macclesfield; MESSRS. BLAKE AND TRAFFORD, Solicitors, Northwich; Mr. GEORGE LLOYD, Solicitor, Liverpool; MESSRS. GREGORY, ROWCLIFFE, AND RAWLE, Solicitors, 1, Bedford-row, London; MESSRS. WEDLAKE AND LETTS, Solicitors, 3, Mitre-court, Temple, London, E.C.; and Mr. KEARY, Solicitor, Stoke-upon-Trent; and at the place of H.Y. LEEMAN, Chief Clerk.

WEDLAKE AND LETTS, 3, Mitre-court, Temple, London  
(Agents for William Keary, Esq., of Stoke-upon-Trent, Staffordshire, Plaintiff's Solicitor).

HEPWORTH IRON AND COAL AND PIPE AND BRICK WORKS, NEAR SHEFFIELD.

TO BE SOLD, BY PRIVATE CONTRACT, the IRONWORKS, PIPE AND BRICK WORKS, and COLLIERIES at CROW EDGE, in HEPWORTH, near Hazlehead Station, on the Manchester, Sheffield, and Lincolnshire Railway.

The IRONWORKS consist of two blast-furnaces, one 16 ft. diameter, and the other 19 ft. diameter. The iron produced is among the very best in Yorkshire. The blast-engine is powerful, the cylinder 42 in., and 9 ft. stroke; the blast cylinder, 88 in., sufficiently powerful for three or four furnaces. Hot-blast ovens, with the usual baulking machinery. A casting and moulding house, articled's shop, casting-house, cranes, locomotive engine, weighing-machines, cottages, and numerous other buildings.

The CLOAKWORKS consist of a powerful high-pressure ENGINE, cylinder 27 in., 4 ft. stroke; grinding and pug mill; 2 clay-pans, one 9 ft., and one 6 ft. diameter; pipe-machine, and 4 large brick and pipe sheds; clay-house; and several well-built brick and pipe kilns.

The FREEHOLD LAND and BUILDINGS contain an area of 104A. 2R. 3P., more or less.

There are several RESERVOIRS, with an abundant supply of superior water. These WORKS are situated about one mile from the Hazlehead Station, and are connected with the railway by a branch line worked by a locomotive engine. They are within half-an-hour from Sheffield, and an hour from Manchester.

The COLLIERIES and IRONSTONE MINES are situate in the townships of Hethorpe and Fosstone, and are connected with the ironworks by railway.

The MINERALS are held under lease from the Trustees of the Duke of Leeds and others for various terms, about 19 years unexpired.

The COAL HARDS are the Halifax Hard Bed and Halifax Soft Bed; the former is used for boilers and calcining, the latter for smelting, and is one of the best coking coals of Yorkshire.

There is a large field of IRONSTONE ungot.

There are about 400 acres of Soft Coal on the west side of the throw still un-worked, a large proportion of which is already leased.

There is a railway and tunnel for conveying the coal and ironstone to the ironworks, with stationary engine at each end of tunnel.

The Hard Coal and Fire-clay are worked at Crow Edge, adjoining the iron and brick works. The coal is of the unusual thickness of 32 in., and the fire-clay, which lies immediately under the coal, is from 15 to 18 in. thick.

There is a large field of Hard Bed Coal and Fire-clay; the latter is excellent, and can be cheaply got with the coal. There is a bed of Superior Surface Clay, used for blue bricks.

These works have been established for about twelve years, and have been developed and fitted up with every modern improvement at an enormous cost. The sudden and unexpected death of the last proprietor has caused them to be brought into the market for sale under very exceptional circumstances by his trustee and mortgagee.

The premises are in complete working order, and may be entered upon without delay; very little expenditure beyond the working capital will be necessary. This concern is well worthy the attention of any individual or company having the command of a moderate capital, and will be disposed of on terms to warrant competition.

The most thorough investigation and examination is invited, and every requisite detail and particulars will be furnished on application to J. N. HARRIS, Esq., Hightown House, near York; or CHADWICK and SON, Solicitors, Dewsbury.

N.B.—A considerable proportion of the purchase-money may remain at interest if required. Mr. RICHARD TRAIN, the clerk in charge, will show the works on application.

ENGINE, BOILERS, AND PUMPS ON SALE.

LOW PRESSURE CONDENSING BEAM ENGINE, with 25 in. cylinder, and 4 ft. 6 in. stroke, and TWO cylindrical BOILERS, about 5 ft. long by 5 ft. diameter, with all necessary steam pipes and fittings.

Also, about 60 to 70 ft. of 9-in. PUMPS, and 20 ft. of 16-in. The engine has been pumping 800 gallons per minute in a shaft 180 yards deep, delivering the water in a level midway, and pulled out to make room for a larger one.

For price, &c., which is moderate, apply to Mr. THOMAS KIRKBY, Leeds.

FOR SALE, a high-class 25-horse power PORTABLE STEAM ENGINE; also, a 16-horse power, with or without reversing gear.

FOR SALE, cheap, several first-class second-hand PORTABLE STEAM ENGINES, 3 to 14 horse power, in excellent order.

PIT WINDING GEAR made at a short notice suitable for portable engines

FOR SALE, a first-class MORTAR MILL.

Apply to—

BARROWS AND STEWART, ENGINEERS, BANBURY.

FOR SALE, —THE UNDERMENTIONED ENGINES:—

ONE 50 in. cylinder PUMPING ENGINE, with ONE BOILER.

Wrought iron fly-wheel shaft, and 10-ton fly-wheel.

ONE 12 in. cylinder ROTARY STEAM ENGINE, with ONE 6-ton BOILER.

ONE 12 in. cylinder ROTARY STEAM ENGINE, with 12-ton BOILER.

THREE Cornish BOILERS, from 10 to 12 tons each, in excellent condition.

Also, several Cornish CRUSHERS, of various sizes.

A 60-foot WATER WHEEL, with hammered iron round shaft, cast-iron, sockets, rings, &c.

For further information, apply to—

W. MATTHEWS, ENGINEER, TAVISTOCK.

Tavistock, Feb. 2, 1871.

FOR SALE, BY PRIVATE CONTRACT, at PAR CONSOLS,

Par Station, CORNWALL, and close to Par Shipping Harbour.

ONE 80, and 72 in. cylinder PUMPING ENGINE, and BOILER.

24, 18, and 15 in. WINDING ENGINES and BOILERS.

8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, and 20 in. PUMPS.

If top-door pieces; plunger poles; rod plates; and a large quantity of other useful MINING MATERIALS.

Apply to Capt. PUCKEY, St. Blazey, Cornwall.

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ONE 80, and 72 in. cylinder PUMPING ENGINE,

JOHN HORSLEY  
IRON AND METAL AGENT,

ST. ANN'S SQUARE, MANCHESTER.

PERMANENT CONTRACTORS, and COLLERY RAILS, in STEEL or IRON  
Wrought-Iron or Steel Weldless Locomotive Carriage and Wagon Tyres.  
IRON and Steel Straight and Cranked Axles, Wheels and Axles, Railway Chairs,  
Fish Plates, Bolts and Nuts, Spikes, Cranes, Jacks, Rivets, Hurdles,  
and Chains.  
Black or Galvanized Telegraph Wires, Fencing Wire.  
BLACK, OILED, and GALVANISED CORRUGATED SHEETS.  
Rolled Iron Joints, Wrought-Iron Girder, Roofs, Bridges, Tanks, Bollers, &c.  
Boat Girder, Tank Bridge and Boiler Plates.  
Angle, Tee, and Girder Iron.—Nail Rods, Tin Plates, Holes, Sheets, Lead, Copper,  
Tin, Zinc, and Speier.  
Hot and Cold Blast Pig Iron, &c., &c.

## ORE-DRESSING MACHINERY.

SEPARATION TROMMELS.—Cylindrical, double cylindrical, conical, double conical, and cascade trommels.

JIGGING MACHINES.—Continuous, for coarse and fine sand.

CLASSIFIERS.—For fine sand and slimes.

SHAKING TABLES.—End and side blow.

BUDDLES.—Concave, convex, and continuous.

PERFORATED PLATES.—For Trommels, Jigging Sieves, and Stamp Grates.

For particulars, apply to—

MESSRS. KEMBER AND CO.,  
CLARENDON GROVE, DRUMMOND STREET, N.W., LONDON

## WILLOUGHBY BROTHERS'

## PATENT STEAM ORE STAMPER.

THE MOST SIMPLE AND ECONOMICAL DIRECT-ACTING STEAM-OR STAMPER in existence.  
Apply, for prices and particulars, to WILLOUGHBY BROTHERS, Foundry, Redruth; or Central Foundry, Plymouth.

THE BURLEIGH ROCK DRILL.  
THE BEST AND ONLY PRACTICAL DRILL  
IT DOES NOT GET OUT OF ORDER.

PROGRESSES through Aberdeen granite at the incredible rate  
10' per minute.

SAVES £5 a day as compared with hand labour, independent of the  
enormous saving effected in the general expenses, such as PUMPING,  
VENTILATION, INTEREST OF CAPITAL, &c., from the fact of the  
"put out" being increased four-fold.

DRILL POINTS.—The saving in steel alone is considerable. One  
drill will go through 20 feet of Aberdeen granite  
without sharpening.

Orders received and executed solely by—

MESSRS. CHAS. BALL AND CO., of 26, NEWGATE STREET,  
E.C., LONDON,  
ENGINEERS, CONTRACTORS, AND GENERAL MERCHANTS.

## MACHINERY FOR MINES AND SLATE QUARRIES

SAWING, PLANING, DRESSING, AND ROCK-BOILING MACHINES  
FOR SLATE.

WATER BALANCES, WATER WHEELS, WINDING AND PUMPING MA-  
CHINERY; and PLANT of every description for MINES or QUARRIES.

STEAM ENGINES—STATIONARY, MARINE, or LOCOMOTIVE.

BOILERS AND GIRDER WORK.

SHAFTING, PULLEYS, AND GENERAL MILLWORK.

MACHINERY AND GENERAL CASTINGS.

SPUR and BEVEL WHEELS of any diameter or pitch moulded by machinery  
DE WINTON AND CO.,  
UNION IRON WORKS, CARMARON.

THE PATENT SELF-ACTING MINERAL DRESSING  
MACHINE COMPANY (LIMITED).

T. CURRIE GREGORY, MINING ENGINEER.

OFFICES, 62, ST. VINCENT STREET, GLASGOW

This company grants licenses, under their patents, for the use, singly or in  
combination, of the most approved machinery for dressing ores, comprising  
Stamps, Jiggers, Side-blow Percussion Tables, Classifiers, and Buddies.

The whole in combination are in successful operation at Rhosydd Mines,  
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The Jiggers are largely used at the Van, Caldbeck Fells Mines, and at many  
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Self-acting Floors are in course of construction at various Mines in England  
and Scotland, regarding which Mr. GREGORY will be pleased to give information,  
answer all enquiries, and give orders for inspection.

He is prepared to give designs and estimates for the supply of Machinery,  
and for the laying out of Floors.

LICENSED MAKERS FOR GREAT BRITAIN.

Messrs. WILLIAMS, Perran Foundry Company, Cornwall, for Cornwall  
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Flint, Denbigh, and Anglesea.

Messrs. EASTON AND TATTERSALL, Leeds, for part of Montgomeryshire,  
Cheshire, Shropshire, Derbyshire, Staffordshire, Isle of Man, and  
Yorkshire south of Ripon.

Messrs. FATTISON, DAVIDSON, AND SPENCER, Hexham, for North-  
umberland, Cumberland, Westmoreland, Durham, and part of York-  
shire north of Ripon.

Messrs. THOMAS LAMB AND SONS, Glasgow, for Scotland.  
All are licensed to make for Foreign Parts.

T. CURRIE GREGORY, Secretary.

## HEAT-ENDURING PAINT.

THE TITANIC PAINT will ENDURE a DEGREE of HEAT  
that will ENTIRELY DESTROY all other known Paints.

BOARS OF IRON have been coated with all the various known Paints, and  
placed in the flues of forges while in operation, and in other equally trying  
situations. IN EVERY CASE THE TITANIC PAINT HAS BEEN UN-  
JURED, while ALL THE OTHER PAINTS WERE TOTALLY DESTROYED.

The TITANIC PAINT also afford a PERFECT PROTECTION TO IRON  
FROM OXIDATION in any situation, and PRESERVES WOOD AND OTHER  
MATERIAL FROM DECAY.

Information, as to prices, terms, &c., with particulars of trials, and opinions  
of its value from consumers, can be obtained on application to—

THE TITANIC PAINT AND COLOUR COMPANY,

13, ST. MARY'S ROW, BIRMINGHAM.

WILTON'S MATHEMATICAL INSTRUMENT ESTABLISHMENT REMOVED  
from St. Tay to A. JEFFERY'S, CAMBORNE.

W. H. WILTON begs to thank his friends for their liberal support for so  
many years, and inform them that (having opened business at Valparaiso)  
he has now declined business in England in favour solely of Mr. A. JEFFERY,  
MATHEMATICAL INSTRUMENT MAKER, CAMBORNE, whom he considers  
(having been an assistant to his father for several years) is in every way  
capable of creditably maintaining the good name universally awarded to Wilton's  
instruments.

## A. JEFFERY

Respectfully begs to inform Mine Managers, Surveyors, Engineers, &c., that  
having purchased Mr. Wilton's business, and the very valuable acquisitions and  
appliances belonging thereto, he has enlarged his Mathematical Instrument  
Manufactory, and is prepared to supply THEODOLITES, DIALS, POCKET DIALS,  
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Repairing in all its branches promptly attended to.

ACCIDENTS CAUSE LOSS OF LIFE.  
ACCIDENTS CAUSE LOSS OF TIME.  
ACCIDENTS CAUSE LOSS OF MONEY.

PROVIDE AGAINST ACCIDENTS OF ALL KINDS

BY INSURING WITH THE  
RAILWAY PASSENGERS' ASSURANCE COMPANY.  
An annual payment of £3 to £6 per £100 at death, or an allowance  
at the rate of £6 per week for injury.

£565,000 have been paid as compensation—  
One out of every 12 Annual Policy Holders becoming a claimant each year.  
For particulars, apply to the Clerks at the Railway Stations, to the  
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64, CORNHILL, and 10, REGENT STREET, LONDON.  
WILLIAM J. VIAN, Secretary.

## THE MINING JOURNAL.

PRIZE MEDALS—PARIS, 1867; HAVRE, 1868; HIGHLAND SOCIETY, 1870.

## B. &amp; S. MASSEY, OPENSHAW CANAL IRONWORKS, MANCHESTER.



PATENTEES AND MAKERS OF DOUBLE AND SINGLE-ACTING STEAM HAMMERS of all sizes, from 17 lbs. to 20 tons, with Self-acting or Hand Motions, in either case giving a perfectly DEAD-BLOW, while the former may be worked by hand when desired. Large Hammers, with Improved Framing, in Cast or Wrought Iron. Small Hammers working up to 500 blows per minute, in some cases being worked by the foot of the smith, and not requiring any separate driver.

## SPECIAL STEAM STAMPS, of great importance for Smith Work, Bolt-making, Punching, Bending, &amp;c.

Hammers for Engineers, Machinists, Shipbuilders, Steel Tillers, Millwrights, Coppersmiths, Railway Carriage and Wagon Builders, Colliery Proprietors, Ship Smiths, Bolt Makers, Cutlers, File Makers, Spindle and Flyer Makers, Spade Makers, Locomotive and other Wheel Makers, &c.; also for use in Repairing Smithies of Mills and Works of all kinds, for Straightening Bars, Bending Cranks, Breaking Pig-Iron, &c.

STEAM HAMMERS AND STEAM STAMPS MAY ALWAYS BE SEEN AT WORK.

CHAPLIN'S PATENT STEAM ENGINES AND BOILERS.  
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## STATIONERY ENGINES,

From 1 to 30-horse power. No building required.

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1½ to 30 tons. For wharf or railway.

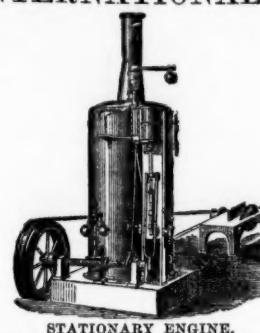
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6 to 27-horse power. Light and heavy.

## DONKEY FEED-ENGINES.



The ORIGINAL Combined Vertical ENGINES and BOILERS introduced by Mr. CHALIN in 1855.  
EACH CLASS KEPT IN STOCK FOR SALE OR HIRE.

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## PATENT

"NE PLUS ULTRA" RESPIRATOR,  
FOR  
Coal Mines, Fire Brigades, Gas Companies,  
Breweries, Foul Wells, Chemical Works,  
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This NEW RESPIRATOR is offered to the public as an INVALUABLE MEANS for SAVING LIFE and PROPERTY.

"I have used it successfully at several fires, and can with confidence recommend it as one of the most useful inventions that has ever been discovered to assist firemen in the discharge of their duties."

(Signed) ALFRED TOZER,  
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PRICES:—No. 1, £8 8s.; No. 2, £9 9s.; No. 3, £10 10s. Goggles for firemen 10s. each extra. Lamps for collieries extra.

For particulars, apply to—

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## TO PROPRIETORS OF MINES, COLLIERIES, AND IRONWORKS.

## A SAVING OF AT LEAST £20 A TON

MAY BE EFFECTED BY ADOPTING

## THE DON LUBRICATING OIL.

It has been in use now for nearly three years by the WIGAN COAL AND IRON COMPANY, whose Manager, Mr. ALFRED HEWLETT, says—"I have used the Don Oil for nearly two years, and FIND IT TO ANSWER exceedingly well for the purposes of lubrication."

We have also most flattering written opinions, which could be produced, from Mr. THOMAS EMMERSON FORSTER, M.E., of Newcastle-upon-Tyne; from Mr. HARTOP, of Elsecar; from Messrs. VICKERS, SONS, and CO., of Sheffield; and from numbers of others. In face of such indisputable testimony, it is simply a WASTE OF MONEY to use the common kinds, which are nearly DOUBLE THE PRICE. Trials may be made AT OUR EXPENSE: particulars forwarded on application.

AGENTS WANTED, or special arrangements might be made with parties introducing it to their friends.

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## SELF-LUBRICATIVE STEAM &amp; HYDRAULIC ENGINE PACKING.

This Packing is invaluable to all Users of Steam-Power; it supersedes anything of the kind ever invented; it is now in use in all the Chief Railways and First Firms in this Country and Abroad, and is

THE ONLY PACKING THAT WORKS WITHOUT OIL OR GREASE,

Does not char, is pliable, keeps the rods

COOL, BRIGHT, AND CLEAN,

And lasts longer than any other, thereby

SAVING FULLY 200 PER CENT.

To the User, in oil, labour, and material.

Can be had only from the Agents throughout the country, appointed by

THE SOLE LICENSEES,

HENRY HOUSE AND CO.,  
CATHERINE STREET, CITY ROAD, LONDON, E.C.

Where also may be obtained, the LUBRICATIVE PACKING COMPANY'S

## ANTI-FRICTION CREAM OIL,

Which Lubricates perfectly, keeps the Bearings Cool, and does not become Viscid or Glutinous.

AWARDED TWENTY GOLD AND SILVER FIRST-CLASS PRIZE MEDALS.

IMMENSE SAVING OF LABOUR.

TO MINERS, IRONMASTERS, MANUFACTURING CHEMISTS, RAILWAY COMPANIES, EMERY AND FLINT GRINDERS, MCADAM ROAD MAKERS, &amp;c., &amp;c.

# BLAKE'S PATENT STONE BREAKER, OR ORE-CRUSHING MACHINE,

FOR REDUCING TO SMALL FRAGMENTS ROCKS, ORES, AND MINERALS OF EVERY KIND.  
This is the only machine that has proved a success. This machine was shown in full operation at the Royal Agricultural Society's Show at Manchester, and at the Highland Agricultural Society's Show at Edinburgh, where it broke 1½ ton of the hardest trap or whinstone in eight minutes, and was AWARDED TWO FIRST-CLASS SILVER MEDALS.

It has also just received a SPECIAL GOLD MEDAL at Santiago, Chili.  
It is rapidly making its way to all parts of the Globe, being now in profitable use in California, Washoe, Lake Superior, Australia, Cuba, Chili, Brazil, and throughout the United States, and England. Read extracts of testimonials:—



*The Parys Mines Company, Parys Mines, near Bangor, June 6.—We have had one of your stone breakers in use during the last 12 months, and Capt. Morcom reports most favourably as to its capabilities of crushing the materials to the required size, and its great economy in doing away with manual labour.*

*For the Parys Mining Company.*

JAMES WILLIAMS.

*Eaton Emery Works, Manchester.—We have used Blake's patent stone breaker made by you for the last 12 months, crushing emery, &c., and it has given every satisfaction. Some time after starting the machine a piece of the moveable jaws about 20 lbs. weight, chilled cast-iron, broke off, and was crushed in the jaws of the machine to the size fixed for crushing the emery.*

H. R. MARSDEN, Esq.

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YORK, IRELAND.—My crusher does its work most satisfactorily. It will break 10 tons of the hardest copper ore stone per hour.

WM. G. ROBERTS.

GENERAL FREMONT'S MINES, CALIFORNIA.—The 15 by 7 in. machine effects a saving of the labour of about 30 men, or \$75 per day. The high estimation in which we hold your invention is shown by the fact that Mr. Park has just ordered a third machine for this estate.

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KIRKLESS HALL, NEAR WIGAN.—Each of my machines breaks from 100 to 120 tons of limestone or ore per day (10 hours), at a saving of 4d. per ton.

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YORK, IRELAND.—My crusher does its work most satisfactorily. It will break 10 tons of the hardest copper ore stone per hour.

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MEADOW LANE, LEEDS,  
ONLY MAKER IN THE UNITED KINGDOM.

## GALLOWAY'S PATENT CONICAL WATER TUBES FOR STEAM BOILERS.

The above TUBES are made with such an amount of taper as will allow the bottom flange to pass through the hole in the upper side of the boiler flue, which renders their introduction into ordinary fluid boilers a simple operation, and with the following advantages:—

The POWER of the BOILER is CONSIDERABLY INCREASED, and the FLUES ARE MATERIALLY STRENGTHENED.

The CIRCULATION of the WATER is MUCH IMPROVED, and UNEQUAL EXPANSION with its attendant evils, PREVENTED. LIABILITY TO PRIME IS LESSENED.

These Tubes have now been in use upwards of fourteen years, and above 50,000 are in work in various parts of the country with the best results.

They can be fixed by any boiler-maker, but can only be obtained from the Patentees.

W. & J. GALLOWAY & SONS,  
ENGINEERS AND BOILER MAKERS,  
MANCHESTER,  
Makers of Wrought-iron Parallel Tubes, 40s. p. cwt.

Section of the "Galloway" Boiler, showing arrangement of back flues, the furnaces being of the same construction as in the common two-flued boiler.

MANUFACTURERS OF THE WELL-KNOWN

## "GALLOWAY BOILER,"

AS PER SKETCH ANNEXED.

UPWARDS OF TWO THOUSAND OF WHICH ARE NOW AT WORK.

BOILERS OF ANY DIMENSIONS, UPON THIS OR ANY OTHER PLAN, CAN BE DELIVERED WITHIN A FEW DAYS FROM RECEIPT OF ORDER.

## STEAM ENGINES OF EVERY DESCRIPTION.

General Millwrighting.—Hydraulic Machinery.—Polishing, Grinding, and other Machines for Plate Glass.

LEAD ROLLING MILLS AND PIPE PRESSES. CAST AND WROUGHT-IRON GIRDER BRIDGES.

HALEY AND OTHER LIFTING JACKS, BOILER RIVETS, &c.—SCREW BOLTS, STEEL PUNCHING BEARS.

Shearing and Punching Machines Bending Rolls, and every description of Boilermakers' Tools, &c., &c.

## CHAS. PRICE AND CO.'S RANGOON ENGINE OIL, AS SUPPLIED TO H.M. DOCKYARDS AND FLEET.

THIS OIL is suitable to every kind of Machinery. As a lubricant it is equal to the best Sperm or Lard Oil, while it possesses the great advantage of being entirely free from any principle which will corrode the metal bearings.

For particular kinds of Machinery, the Oil may be specially prepared of a consistency and character adapted to the nature of the work to be done.

"Chemical Laboratory, 7, Printing House-square, Blackfriars, April, 1869.  
I herewith certify that the Rangoon Engine Oil, manufactured by Messrs. Chas. Price and Co., is free from any material which can produce corrosion of the metal work of machinery. It is indeed calculated to protect metallic surfaces from oxidation.

"The lubricating power of this oil is equal to Sperm or Lard Oil.

"T. W. KEATES, F.C.S., &c. &c.  
Every parcel of the Oil sent from the works bears the Trade Mark of the Firm.  
LONDON: CASTLE BAYNARD, UPPER THAMES STREET.  
WORKS: MILLWALL, POPLAR!



By a special method of preparation, this leather is made solid, perfectly close in texture, and impermeable to water; it has, therefore, all the qualifications essential for pump buckets, and is the most durable material of which they can be made. It may be had of all dealers in leather, and of

I. AND T. HEPBURN AND SONS,  
TANNERS AND CURRIERS, LEATHER MILLBAND AND HOSE PIPE  
MANUFACTURERS,  
LONG LANE, SOUTHWAARK, LONDON.  
Prize Medal 1851 1855, 1862, for  
MILL BANDS, HOSE, AND LEATHER FOR MACHINERY PURPOSES.

**M.** R. HENRY GIBSON will OPEN his NEW OFFICES at No. 7, ST. BENET PLACE, GRACECHURCH STREET, LONDON, on Wednesday, the 12th of July next, and will then be happy to renew business transactions with all his old friends.

## AMERICAN MINES.

**M.** R. ROSS BROWNE, formerly United States Commissioner of Mining Statistics, intends RETURNING to the PACIFIC COAST about the 20th of July, and is desirous of FORMING ENGAGEMENTS in the interest of Purchasers, to EXAMINE and REPORT upon MINES and MINING PROPERTIES in COLORADO, NEVADA, UTAH, CALIFORNIA, and the adjacent States and Territories.

Applications, in writing, addressed to Mr. BROWNE, No. 5, Duke-street, Port-lane-place, will receive attention.

## TO MINING COMPANIES, AND OTHERS.

**T**HE LONDON AND COLORADO COMPANY, having responsible connections throughout the entire district of Colorado, can FURNISH the most reliable GEOLOGICAL, TOPOGRAPHICAL, and ENGINEERING SURVEYS, MAPS, PLANS, and VALUATIONS of NEW PROPERTIES, as well as REPORTS and SAMPLES for ASSAY of any particular property required. One member of the company, who resided in Colorado for more than eight years, will again visit it shortly, and would personally report on any negotiate any matter, if required.

For terms, apply to the LONDON AND COLORADO COMPANY, 2, Winchester-buildings, Great Winchester-street, London.

## DICKER'S AUSTRALIAN AND LONDON MINING AND GENERAL AGENCY.

4, ROYAL EXCHANGE AVENUE, E.C.

Established in 1868.

The fullest and reliable information relative to Australian Gold Mine Investments can always be obtained from the undersigned.

THOMAS DICKER,

(Late Editor of the "Mining Record," Melbourne).

**M.** R. JOHN CARTER, MINE AND SHARE DEALER, CAMBORNE, CORNWALL (Son of the late Thos. Carter), transacts business in every description of shares at close market prices of the day.

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**M**ESSRS. CAMERON AND CO., SHAREBROKERS, CHESTER, having a thorough knowledge of the Lead Mining Districts in Wales, are ENABLED to FURNISH the BEST and MOST RELIABLE INFORMATION on all WELSH LEAD MINES.

Messrs. CAMERON and Co. have FOR DISPOSAL, at £1 each, some SHARES in TWO MINES of great promise, likely to advance considerably in price. Also a FEW SHARES FOR SALE in a VALUABLE COLLIERY that will pay a high rate of interest, and special business operations in Sweetland Creek Gold Mine, Roman Gravels, Tankerville, and Perkins Beach Mines.

OFFICES: BRIDGE STREET CHAMBERS, CHESTER.

**M**ESSRS. LISCOMBE AND CO., 39A, SOUTH CASTLE STREET, LIVERPOOL, MINING SHARE BROKERS.

Have the BEST and LATEST INFORMATION on all the LEAD MINES of WALES and the NORTH OF ENGLAND, and on all AMERICAN MINES, and are in a position to transact business in most of them at closest market prices.

Messrs. LISCOMBE and Co. issue monthly the "Liverpool Mining Circular," containing special information on all the leading Welsh Mines, which can be had on application.

**M** R. R. PERCY ROBERTS, FINANCIAL AGENT, 60, ENGLISH STREET, CARLISLE.

**M** R. JOHN POOLE, ENGINEER, HAYLE, CORNWALL, having had thirty years' experience in the leading manufactory of the county, is in a good position to procure NEW and SECONDHAND ENGINES, and MINING MACHINERY IN GENERAL, for Foreign and Home Mines.

Inspections and valuations attended to.

**C**APTAIN ABSALOM FRANCIS, GOGINAN, ABERYSTWITH, MINING AGENT, ENGINEER, AND SURVEYOR. The great success which is attending the opening and working of the Mines the counties of Cardigan and Montgomery, and the many properties placed at the disposal of Capt. ABSALOM FRANCIS, induces him to offer his services, either to ADVISE, INSPECT, REPORT, or SURVEY, for Mining Companies or private shareholders.

For terms, apply to Capt. ABSALOM FRANCIS, as above.

**FREDERICK MIRLS,** ENGINEERING AUCTIONEER, VALUER AND SURVEYOR, 17, ST. ANN'S SQUARE, MANCHESTER.

**WHEATLEY KIRK & PRICE,** (ESTABLISHED 1850), AUCTIONEERS AND VALUERS OF EVERY DESCRIPTION OF

COLLIERY PLANT, IRONWORKS, &c. Estimates for Periodical Surplus Sales, Annual Valuations, &c.

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**TURNTABLES.** TO OWNERS OF TRAMWAYS, AND OTHERS.

**W**E ARE PREPARED TO SUPPLY IMPROVED IRON TURNTABLES, with all necessary fittings, fastenings, bolts, &c., 12 ft. diameter, £40; 13 ft. diameter, £45. Specifications and lithographs on application to—

WHEATLEY KIRK AND PRICE,

35, PRINCESS STREET, MANCHESTER.

**JOHN BOURNE AND CO., ENGINEERS, SHIPBUILDERS, AND CONTRACTORS, BLOWING ENGINES, WINDING ENGINES,** Bourne's Patent Spherical Governors, Bourne's Patent Feedwater Heaters, Bourne's Patent Gas Furnaces, Bourne's Patent Coal-dust Furnaces, PUMPING ENGINES, STEAM BOILERS.

66, MARK LANE, LONDON.

**THE GREAT WESTERN HOTEL** (Snow Hill Station), BIRMINGHAM.

"One of the most elegant, comfortable, and economical Hotels in the three kingdoms."—The Field, July 31, 1869.

**IRON AND COAL COMPANIES.**

res.	Company.	Paid.	Price.
0	John Abbott and Co. [L.]	£ 75 0 0 ..	22 10 dis.
0	Ashbury Co. [L.]	90 0 0 ..	40 35 dis.
0	Blair-avon Iron and Steel Co. [L.]	7 10 0 ..	30 35 pm.
0	Bolewick, Vaughan, and Co. [L.]	30 0 0 ..	30 35 pm.
10	Connett Iron Co. [L.]	70 0 0 ..	6 1/2 7 pm.
10	Cannell and Co. [L.]	80 0 0 ..	10 9 dis.
32	Ebbow Vale Co. [L.]	27 10 0 ..	7 1/2 7 dis.
6	Fairbairn Engineering	20 0 0 ..	1 1/2 2 pm.
20	General Mining Association [L.]	10 0 0 ..	2 10 dis. par.
15	Hopkins, Gilkes, and Co. [L.]	10 0 0 ..	2 1/2 dis. par.
10	Ironasters' Company [L.]	5 0 0 ..	25 28 pm.
10	Midland Iron Co. [L.]	11 10 0 ..	7 1/2 7 dis.
25	Mercy Steel and Iron Co. [L.]	3 10 0 ..	2 1/2 2 dis.
4	Mundy Iron Ore [L.]	6 7 0 ..	par.
1	Nerubuda Coal and Iron	25 0 0 ..	1/2 2 pm.
85	Palmer's Shipbuilding and Iron Co. [L.]	25 0 0 ..	1 1/2 2 pm.
35	Ditto ditto	85 0 0 ..	1 1/2 2 pm.
100	Parkgate Iron Co. [L.]	65 0 0 ..	1 1/2 2 dis. par.
20	Patent Shaft and Axle Co. [L.]	10 0 0 ..	6 1/2 6 pm.
50	Rhymey Iron Co. [L.]	50 0 0 ..	20 19 dis.
16	Ditto New	18 0 0 ..	5 dis.
40	Shotts Iron Co.	50 0 0 ..	21 20 dis.
100	Sheepbridge Iron and Coal Co. [L.]	55 0 0 ..	8 8 dis.
100	Steepleby Iron and Coal Co.	60 0 0 ..	40 42 pm.
100	Ditto ditto New	10 0 0 ..	8 9 pm.
100	Thames Iron Company	10 0 0 ..	9 11 pm.
75	Titanic Iron and Steel	4 0 0 ..	pm.
100	Vancouver Coal [L.]	6 0 0 ..	1 3/4 dis.
100	Van Iron Ore [L.]	10 0 0 ..	12 10 dis.
100	Wigan Coal and Iron Co.	100 0 0 ..	12 10 dis.
75	Ditto ditto	75 0 0 ..	12 10 dis.

## THE MINING SHARE LIST

## BRITISH DIVIDEND MINES.

Shares.	Mines.	Paid.	Last Pr.	Business.	Total divs.	Per share.	Last paid.
1500	Alderley Edge, c, Cheshire*	10 0 0 ..	1 1/2 2	..	10 6 8 ..	0 5 0 ..	Jan. 1869
20000	Blaen Caefan, s-l, Cardig.*	1 0 0 ..	1 1/2 1 1/2	..	0 1 0 ..	0 1 0 ..	May 1871
6000	Boscawen, t, c, St. Just	1 0 0 ..	..	..	0 2 0 ..	0 2 0 ..	Apr. 1870
300	Botallack, t, c, St. Just	91 5 0 ..	..	230 250	595 5 0 ..	0 5 0 ..	May 1871
20000	Bronifloyd, s-l, Cardigan*	2 10 0 ..	2 1/2 2 1/2	..	2 12 0 ..	0 1 0 ..	Apr. 1871
4000	Brookwood, c, Buckfastleigh	1 16 0 ..	..	..	0 17 6 ..	0 2 6 ..	Mar. 1871
5094	Bwlch Consols, s-l, Cardigan*	4 0 0 ..	..	..	0 9 0 ..	0 2 0 ..	May 1870
6400	Cashwell, t, c, Cumberland*	2 10 0 ..	..	..	0 14 6 ..	0 2 0 ..	Dec. 1870
858	Cashgill, s-l, Newlyn	16 5 7 ..	..	..	16 15 6 ..	0 10 0 ..	Aug. 1869
2450	Cook's Kitchen, c, Illogan	19 14 9 ..	30	28 30	5 18 0 ..	0 12 6 ..	Apr. 1871
867	Cwm Erfin, t, Cardiganshire	7 10 0 ..	..	..	31 18 0 ..	0 5 0 ..	Jan. 1871
128	Cwmystwyth, t, Cardiganshire	60 0 0 ..	..	..	394 10 0 ..	0 2 0 ..	July 1869
280	Dewntown Mines, s-l, Durham	300 0 ..	..	..	177 0 ..	0 2 10 ..	July 1868
1024	Devon Gt. Consols, c, Tavistock	1 0 0 ..	100 105	..	1153 0 ..	0 4 0 ..	May 1871
416	Ding Dong, t, Guylav*	49 14 6 ..	..	..	7 10 0 ..	0 5 0 ..	Aug. 1870
1432	Dolcoath, t, c, Camborne	32 4 8 ..	160	165 170	267 2 6 ..	0 3 0 ..	Apr. 1871
12800	Drake Walls, t, Calstock*	2 10 0 ..	3/4 ..	..	1 3 3 ..	0 1 0 ..	July 1870
6144	East Caradon, c, St. Cleer	2 14 6 ..	4 1/2	5 5/4	14 11 6 ..	0 2 0 ..	July 1867
300	East Darren, t, Cardiganshire	32 0 0 ..	..	..	197 10 0 ..	0 3 0 ..	Apr. 1871
6400	East Pool, t, c, Pool, Illogan	0 9 9 ..	13 1/2	13 18 1/2	11 11 0 ..	0 5 0 ..	May 1871
1906	East Wheal Loyal, t, Wendron	2 9 0 ..	20	18 1/2 19	18 16 0 ..	0 2 0 ..	May 1871
280	Devon Gt. Consols, c, Tavistock	300 0 ..	..	..	78 10 0 ..	0 10 0 ..	June 1871
416	Ding Dong, t, Guylav	49 14 6 ..	..	..	4 8 0 ..	0 2 6 ..	Aug. 1870
12800	Drake Walls, t, Calstock*	2 10 0 ..	3/4 ..	..	0 3 0 ..	0 3 0 ..	June 1871
6144	East Caradon, c, St. Cleer	2 14 6 ..	4 1/2	5 5/4	14 1 0 ..	0 5 0 ..	May 1871
300	East Darren, t, Cardiganshire	32 0 0 ..	..	..	289 3 0 ..	0 15 0 ..	May 1871
6400	New Mining Co., Wrexham	7 0 0 ..	..	..	0 4 0 ..	0 2 1 ..	July 1870
6400	New Pembroke, t, c, Par Station	5 0 0 ..	..	..	0 7 6 ..	0 2 6 ..	Mar. 1871
2000	North Levant, t, c, St. Just	10 12 0 ..	..	..	2 10 0 ..	0 15 0 ..	Feb. 1871
5510	North Wheal Crofty, c, Illogan	3 11 3 ..	2 1/2	2 1/2 2 1/2	0 5 6 ..	0 1 6 ..	June 1871
256	Pendarves United, t, c, Camb.	68 0 0 ..	..	..	18 0 ..	0 3 0 ..	Mar. 1871
5000	Penhale, t, St. Agnes	3 0 0 ..	5	6	1 16 0 ..	0 3 0 ..	Feb. 1871
500	Phoenix, t, c, Linkinhorne	50 0 0 ..	..	..	470 10 0 ..	0 7 0 ..	June 1871
1772	Polberio, t, St. Agnes	18 0 0 ..	..	..	0 17 6 ..	0 10 0 ..	Apr. 1871
2000	Poldice, t, c, Gwennap	10 0 0 ..	..	..	1 10 0 ..	0 10 0 ..	Oct. 1870
12800	Prince of Wales, c, Calstock	0 8 0 ..	..	..	0 10 0 ..	0 1 0 ..	Nov. 1871
12800	Princess of Wales, t, Illogan	8 10 0 ..	..	..	0 10 0 ..	0 1 0 ..	June 1871
1024	Herodotus, t, near Liskeard	8 10 0 ..	45	42 44	87 0 ..	0 15 0 ..	Dec. 1870
25000	Killaloe, st, Tipperary	1 0 0 ..	..	..	0 2 11 0 ..	0 9 0 ..	Dec. 1870
165	Levant, c, t, St. Just	10 8 1 ..	..	..	101 0 ..	0 2 0 ..	Aug. 1869
400	Lisburne, t, Cardigan	18 15 0 ..	..	..	343 10 0 ..	0 2 0 ..	Mar. 1871
9000	Marke Valley, c, Cardigan	4 10 6 ..					